Emotional mapping: exploring how mapping of emotion can add value to knowledge on decision making in contested spaces

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I confirm that the word count of this thesis is less than 100,000 words

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I am deeply grateful to all the participants. Meeting with residents, decision makers and other stakeholders to gather data was the most enjoyable and enlightening part of this PhD. I am genuinely honoured to have shared their input, reflections, memories and opinions and I hope that the work herein does justice to their stories.

Lastly, I want to thank my partner Dr Michele Kavanagh for the ceaseless enthusiasm, patience, practical support, academic guidance and feedback.

Abstract

Literary and methodological review on the topics of contested space, emotion, decision making and mapping revealed a gap where these key concepts could come together and form a new interdisciplinary opening for emotional mapping. This thesis presents SpatialGT, a new methodology, as a means to enact research in this opening. Straddling planning, geography, social policy and psychology the work takes an interdisciplinary position in relation to how knowledge is constructed, communicated, verified and valued. Emotion and mapping "do work", shaping the world and inscribing meaning on place and as such are valuable "forms of intelligence" when looking at the conflicts and multiple meanings that define contested spaces. SpatialGT is a tailored approach to researching emotion, space, engagement and policy simultaneously. Qualitative research procedures of Grounded Theory (GT) converge with mapping, creating a combined visual and discursive process of analysis and interpretation. The intention of this work is to extend the opportunities for the emotions and perceptions of residents and other users of contested spaces to inform decisions made about their environment. The emotional context in these spaces - memory, attachment, tradition, fear - play a significant role in how contested spaces are used by different groups. This research process seeks to give voice and shape to those different, often conflicting narratives. SpatialGT was tested in several locations across Belfast, each defined in different ways as a contested space. The first type is sovereign, where ethno-national contest defines two interface communities in North Belfast, The second - pluralist contest - is observed and explored in the Holyland in South Belfast where conflict arises between a transient student population, growing migrant communities and longer term local residents. A third reflective study seeks to assert the value of emotional mapping in decision making by presenting the outputs of previous studies to senior policy makers. The development, testing and evaluation of SpatialGT across these studies led to the construction of new understandings of the relationship between emotion and space in sites of contest as well as a methodological proposition that provides innovative ways of gathering, analysing and interpreting qualitative and spatial knowledge.

List of Abbreviations and Acronyms

BIP	Belfast Interface Projects
BME	Black and Minority Ethnic
BSC	Building Successful Communities
CCRF	Cliftonville Community Regeneration Forum
CGT	Classic Grounded Theory Method
CNR	Catholic/Nationalist/Republican
DoE	Department of the Environment of Northern Ireland
DoJ	Department of Justice of Northern Ireland
DfC	Department for Communities of Northern Ireland
DfI	Department for Infrastructure of Northern Ireland
GIS	Geographic Information Systems
GTM	Grounded Theory Method
GWCS	Greater Whitewell Community Surgery
IFI	International Fund for Ireland
LPS	Land & Property Services
LOCA	Lower Oldpark Community Association
LORAG	Lower Ormeau Resident's Action Group
MFANI	Muslim Family Association of Northern Ireland
NI	Northern Ireland
NISRA	Northern Ireland Statistics and Research Agency
OECD	Organisation for Economic Co-operation and Development
OFMDFM	Office of the First Minister and Deputy First Minister
OSM	OpenStreetMap
OSNI	Ordnance Survey of Northern Ireland
PACT	Partners and Communities Together
PBSA	Purpose Built Student Accommodation
PPGIS	Public Participation Geographic Information System
PSNI	Police Service of Northern Ireland
PWP	Peace Walls Programme
PUL	Protestant/Unionist/Loyalist
SpatialGT	Spatial Grounded Theory Method
SPED	Special Purchase of Evacuated Dwellings
TBUC	Together: Building a United Community

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Chapter 1 Introduction

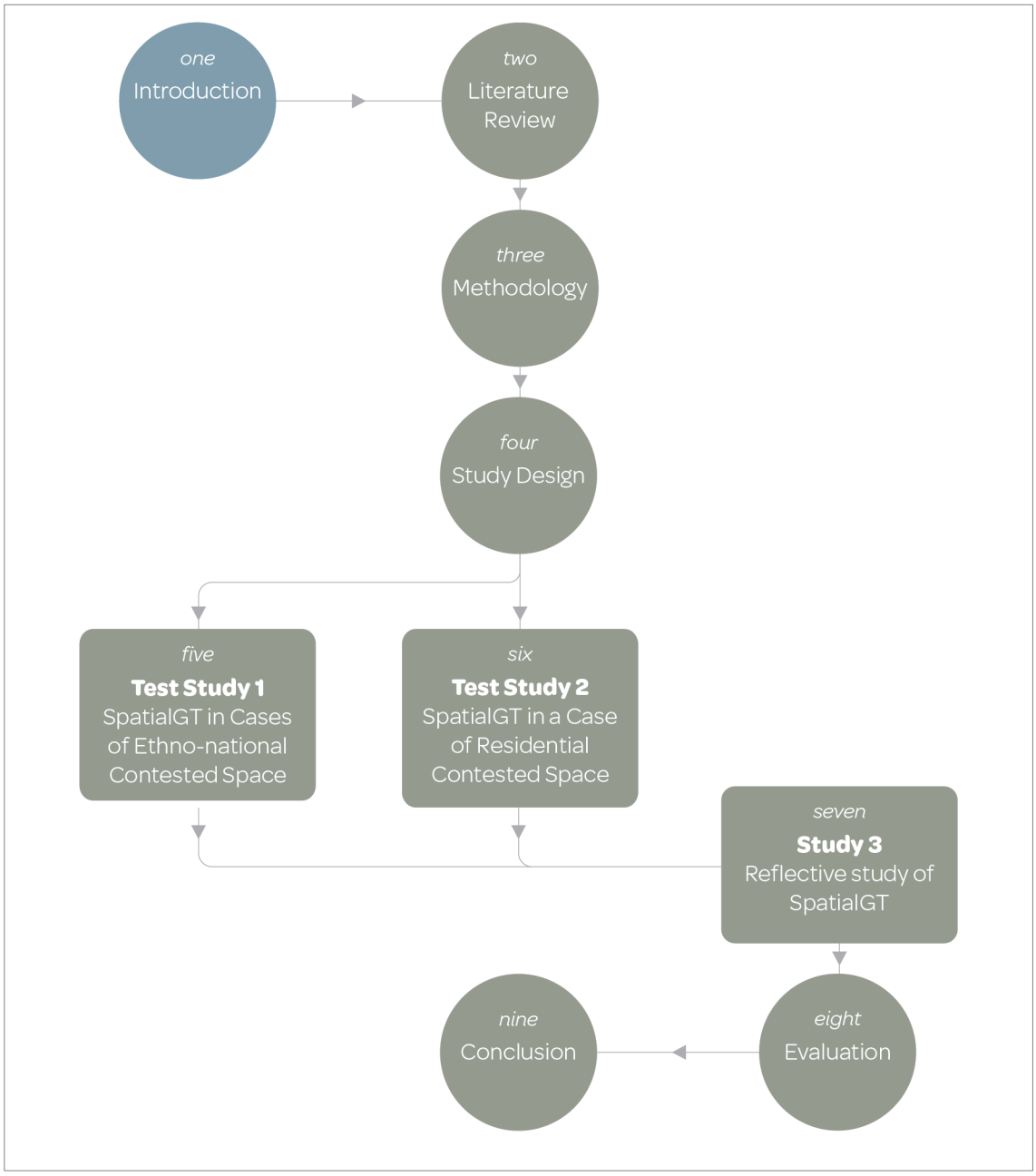


Figure 1-1 Diagram showing all thesis chapters (i)

1.1 Introduction

Time comes into it.

Say it. Say it.

The universe is made of stories,

not of atoms.

(Rukeyser, 1968, p.2)

The degree to which we find ourselves both shaping our environment and being shaped by it - in no particular order - is the degree to which we are emotionally engaged with the spaces we inhabit. Through emotional engagement, we can find self-recognition, self-expression and self-authorship.

This thesis presents a new methodology - **Spatial Grounded Theory Method (SpatialGT)** - as a means to explore the interrelationships between emotion, mapping, planning decision making and contested space. The methodology was formulated to respond to the unique challenges of gathering, mapping and interpreting emotion and perceptions in sites of contest in Belfast, Northern Ireland (NI). The research lens is a spatial, social constructivist one, whereby it is held that emotion and space shape each other.

The research question, **How can mapping of emotions make a meaningful contribution to policy decision making in contested space?** has arisen in the context of a reformed NI planning system which seeks to enhance public consultation processes in order to ensure a sustainable and equitable future for

diverse communities. There is little research or praxis into how or to what extent emotion plays a part in public consultation in the built environment, or indeed how emotion shapes the way we live or strive to live in spaces - particularly in contested spaces - where the expression of individual and/or group identity is often fraught, where there are proportionally high social, economic, educational and safety challenges and where a legacy of loss and violence is embedded in the collective psyche. This thesis seeks to unearth the experiences of those living and working in contested spaces in NI in an effort to help find a way to give voice and space to those experiences.

The research question raised several other fundamental questions. What is the nature of the knowledge this question seeks to uncover? What is emotion? How is it mapped? How is decision making informed? What are the implications for contested space? In order to answer these questions, five objectives were delineated. The first objective was to explore academic literature that could inform the research question. The four concepts of emotion, mapping, contested space and decision making were identified as cornerstones of the thesis. Their literary contexts and methodological implications are explicated in later chapters but here, by way of an introduction to the four concepts, the following section address each in turn.

1.2 Emotion, Mapping, Contested space and Decision making

1.2.1 Emotion

Emotion is understood in this thesis as the ability to act and be acted upon in the world. As such, there are no categorisations or measures in place, and no prior

theory to be proven. Instead, the work seeks to uncover the ways in which people freely express their feelings about their environment, about others that share it, and indeed about their relationship with emotionality itself. Not only is emotion explored as an experience at the personal level but also at the relational. The impact of emotion on the interaction between levels of power and influence has particular significance here, as the research seeks to explore how mapping of emotion can impact decision making; this is necessarily an emotional, relational process.

An 'emotion turn' (Boehner et al., 2007; Davidson et al., 2005) occurred in a number of disciplinary fields from geography to human computer interaction towards the end of the twentieth century. *Emotional Geographies* (Davidson et al., 2005) brought together emerging research, ideas and theories on emotion and environment and established out a new sub-section of human geography. This publication was foundational to the new area of geography and - due to its interdisciplinary focus - became a vital reference for emotional and spatial turns in the social sciences which sought to address global problems. Emotion came to be understood as having a two-way relationship with environment, shaping attitudes about emplaced practices while simultaneously informing "enactment and location of human experiences in a specific spatial and temporal context" (Kavalski, 2011, p.244). The focus on emotion gave human geographers "access to insights that help them demonstrate the complex embeddedness of place in the interactions of its inhabitants (ibid., p.244). Extending thinking on emotion, Bondi (2005) called for:

> *"emotion to be approached not as an object of study but as a relational, connective medium in which research, researchers and research subjects are necessarily immersed. (Bondi, 2005, p.433)*

The emotional turn builds on a humanist approach to geography previously explored by Relph, (1976) and Tuan (1979) and continues to inform the work of Anderson (2014:2015), Elwood (2002; 2006a; 2006b; Jung & Elwood, 2010) and Kwan (Kwan & Ding, 2008; Kwan, 2015) to name a few contemporary geographers.

While the legacy of the emotional turn remains in today's academic context, in the planning of the built environment - which is essentially a political process - the impact of emotion is not so evident. There appears to be an "emotional turn" in western politics recently, whereby voting patterns in the UK and US demonstrate a transition away from informed decision making, and expert knowledge is rejected by voters (Gove, 2016) in favour of emotional calls to incalculable causes such as sovereignty, nationhood and in the case of the Brexit referendum, change for change's sake. In Northern Ireland too, there has recently been a dramatic shift in voting patterns, with the 2017 election seeing a 10% increase in voter turn-out and a significant change in the balance of power between the two main political parties. Democracy is becoming an unpredictable political horse-race. Emotion, reaction and aspiration are playing a bigger part in voting patterns, and the break from old party loyalties mean there is no such thing as a sure thing. Perhaps now, in this context of emotionally charged decision making and politics, it is time to look at how emotion informs the way we think about the built environment. Emotional mapping can then be seen to bring to bear the spatial on the experiential and vice versa.

1.2.2 Mapping

Beyond the "ontological security" (Kitchin & Dodge, 2007) of the map as a knowable, representative object or tool, mapping as a research and engagement

process ‘does work’ in the social constructivist sense in that it inscribes meaning to space.

More than ever, mapping is part of our everyday lives. Smart phones continuously map our location in Cartesian space and interpret that location in terms of our proximities to services, to our parked car, to our regular destinations and each other. Our location and movement pattern inform online targeted advertising. The digital traces we leave everywhere, via webapps, WiFi connections, product and service reviews, feedback, Google searches, Sat Nav, GPS all inscribe space with new meanings for us and other users of technology.

And yet, this “god’s eye view” (Elwood, 2006) combined with our automation bias and reliance on technology is affecting how we navigate, reducing our capacity to orientate ourselves in space (Konishi & Bohbot, 2013). How can maps and mapping impact our ability to act in the world beyond way-finding and consumerism? Qualitative and mixed method Geographic information Systems (GIS) practice (Knigge & Cope, 2006; Pavlovskaya, 2006: Kwan & Ding, 2008; Nold, 2009), emotional geographies and critical GIS discourse (Harvey, 2000; Schuurman, 2006) explore the capacities of representative and non-representative geographies to construct new knowledge about emotion, bodies and society in space, offering openings for the creation of multiple meanings and reflection on how our world shapes us while we shape it. It is in the context of these interdisciplinary texts that this thesis seeks to construct emotional mapping. as a theoretical framework for SpatialGT.

Emotion and mapping are the two most significant concepts of this thesis, in that the proposed methodology deals directly with emotionality and place. These

concepts have dictated the direction of the work, the main areas of research and the formulation of the methodology. The other two concepts of decision making and contested space provide a context in which to test and give meaning to the work. Empirical studies were conducted in contested spaces, and the capacity for emotional mapping to aid decision making was tested in the final study.

1.2.3 Contested space

Academic research into NI contested spaces has traditionally looked at areas that are defined by ethno-national contest, that is, those spaces where Protestant-Unionist-Loyalist (PUL) and Catholic-Nationalist-Republican (CNR) identities are performed and maintained. Examples are interface or peace wall areas, bonfire sites and parade routes. The implications for planning in areas of ethno-national contest have until relatively recently been minimal due to a strategy of neutrality adopted by planning decision makers (Bollens, 1999). The work of Gaffikin (Morrissey & Gaffikin, 2006; Gaffikin et al., 2008) and Murtagh (Murtagh, 2004; O'Halloran et al., 2004), Shuttleworth and Lloyd (Lloyd & Shuttleworth, 2012; Shuttleworth & Lloyd, 2013) has more recently informed policy direction, particularly in the government's commitment to shared housing provision and so-called shared spaces (OFMDFM, 2005). In the first study of this thesis, two interface sites are studied using SpatialGT, which provided similar but distinct contexts of segregated ethno-national residential land use marked with interface barriers. The second type of contest explored here is pluralist contest, that is, the conflict that arises when communities are in competition or conflict for equity and access (Morrissey & Gaffikin, 2006). This type of contest is not so clearly spatially marked, and in the site selected here for study - the Holyland - different communities live side

by side, amplifying tensions between individuals and contributing to the overall contest in the area. Conflict here is between students, a growing migrant population and long term residents. Studentification (Smith & Holt, 2007), anticipation of destudentification and simultaneous growth in migrant and refugee populations across Belfast is putting increasing pressure on this area of dense private rental accommodation.

It is anticipated that through the testing of the new methodology in these various contested contexts, a clear picture of its applicability and suitability emerges.

1.2.4 Decision making

The third study in this thesis brings into focus the context of decision making in the built environment in Northern Ireland by presenting findings to senior policy makers and inviting them into a reflective research process. SpatialGT is used in this study to gather, analyse and interpret data that directly asserts the quality, fit and possibilities of findings and outputs, thereby grounding the potential application of the methodology for future work. As mentioned above, policy making is essentially political. In areas of contest, the political is not as democratic or representative as we might hope. Interface barriers mark the edges of largely single-identity communities. Identities on the two sides of these walls - and indeed the two sides of Northern Irish society - are defined by polarised religious, political and sovereign positions. The political implications for the removal of walls and future creation of mixed-identity housing or advancement of one identity onto land traditionally associated with the ‘other side’ is that the political demographic of a given ward or area might shift (Nolan, 2014). Imbalances in housing demand consistently demonstrate greater growth in CNR communities and decline in PUL communities within Belfast,

particularly in highly segregated interface locations. This fuels concern over the future 'greening' (the colour associated with CNR identity) of deeply segregated parts of Belfast while at the same time, the government seeks to make the city more integrated. In this way, the process of integration prompts fear and anxiety of a loss of cultural identity, in addition to the day-to-day fears of living in deeply divided spaces. In contrast, Botanic ward which covers the Holyland and surrounding lands had a voting turn out in the 2016 Assembly elections of approximately 28% which is the lowest of all wards in Northern Ireland [Note this statistic was calculated by the author based on statistics from the Electoral Office of Northern Ireland (EONI, 2016) and 2015 census turnout statistics (NISRA, 2015)]. This can be attributed to the dominance of a transient student population who tend not to register their vote in term-time accommodation. The capacity for political representation under such conditions is quite low, yet there is a need to manage services and resources to serve the area all the same. How can communities of identity - long-term residents, students and so-called new communities - find a voice in this context? In these two deeply fragmented types of space, SpatialGT attempts to give voice to a variety of groups with diverse needs and concerns in an effort to make connections between lived experience and policy.

1.3 Assumptions

The following assumptions which emerged from the literature studied help to locate the epistemological position of this work:

- Mapping of qualitative data aids decision making
- Emotion has a particular relationship with place, or space, about which no dominant theory exists.

- By actively engaging communities within contested spaces in research, a clearer picture of the barriers to change will emerge.
- The enactment of engagement will empower those communities to voice their wishes, concerns and aspirations.

These assumptions highlight the main links between the concepts of mapping, emotion, decision making and contested space. By exploring the literature, methods and evaluation of previous work that share these assumptions, a framework for emotional mapping was imagined. SpatialGT emerged from the combination of Constructivist Grounded Theory Method principles with contemporary mapping processes. The two are interlinked at key junctures from data gathering through to interpretation, evaluation and dissemination. The emerging methodology retains the interpretative, iterative aspects of qualitative Grounded Theory as well as the engaging, representative, inscriptive and communicative power of mappings. Through the use of mapping, stakeholders were supported and encouraged to reposition themselves in relation to contested spaces, via the aerial view, from the day-to-day lived experience to a wider, authorial perspective in which they might see new possibilities, new relationships and new knowledges.

The central aim of this thesis is **to explore the potential application of Emotional Mapping as a tool for policy decision-making in contested spaces**. In order to reach that aim, five objectives were identified, which prompted consideration of theoretical, epistemological, methodological and evaluative aspects of the key concepts in an interdisciplinary framework. The research objectives are listed in Table 1-1 below, along with sub-objectives.

Table 1-1 Research Objectives

1	**Establish a theoretical framework for emotional mapping** • Conduct a literature review on mapping, emotion, planning policy, contested space and engagement
2	**Use theoretical framework to design a method of capturing and recording emotion** • Research psychological, cultural, historical and theoretical understandings of emotion • Compare models of measurement of emotion • Select an inductive method to structure and employ in primary research into emotion of contested space
3	**Formulate and implement a mapping strategy** • Carry out a literature review on mapping, in particular participatory GIS and qualitative mapping • Develop a system of mapping that is suitable for emotion data • Input and illustrate the 'emotional map'
4	**Assess the potential impact/utility/usefulness of SpatialGT** • Assess quality, fit and possibilities of mapped and discursive outputs in decision making • Assess potential of SpatialGT as a research methodology
5	**Identify implications for future development and application of SpatialGT** • Highlight the theoretical, procedural and practical implications for emotional mapping with SpatialGT

1.4 Thesis Structure

As can be seen in Figure 1-2, the research objectives are addressed in a combined, cumulative way by literature and empirical research. Each key component is

represented as a concentric circle or layer on the diagram. From the central research question, the five objectives emerge. These objectives span outward along axes on which the subsequent elements of the thesis are built, illustrating in turn the mechanisms by which those objectives are met.

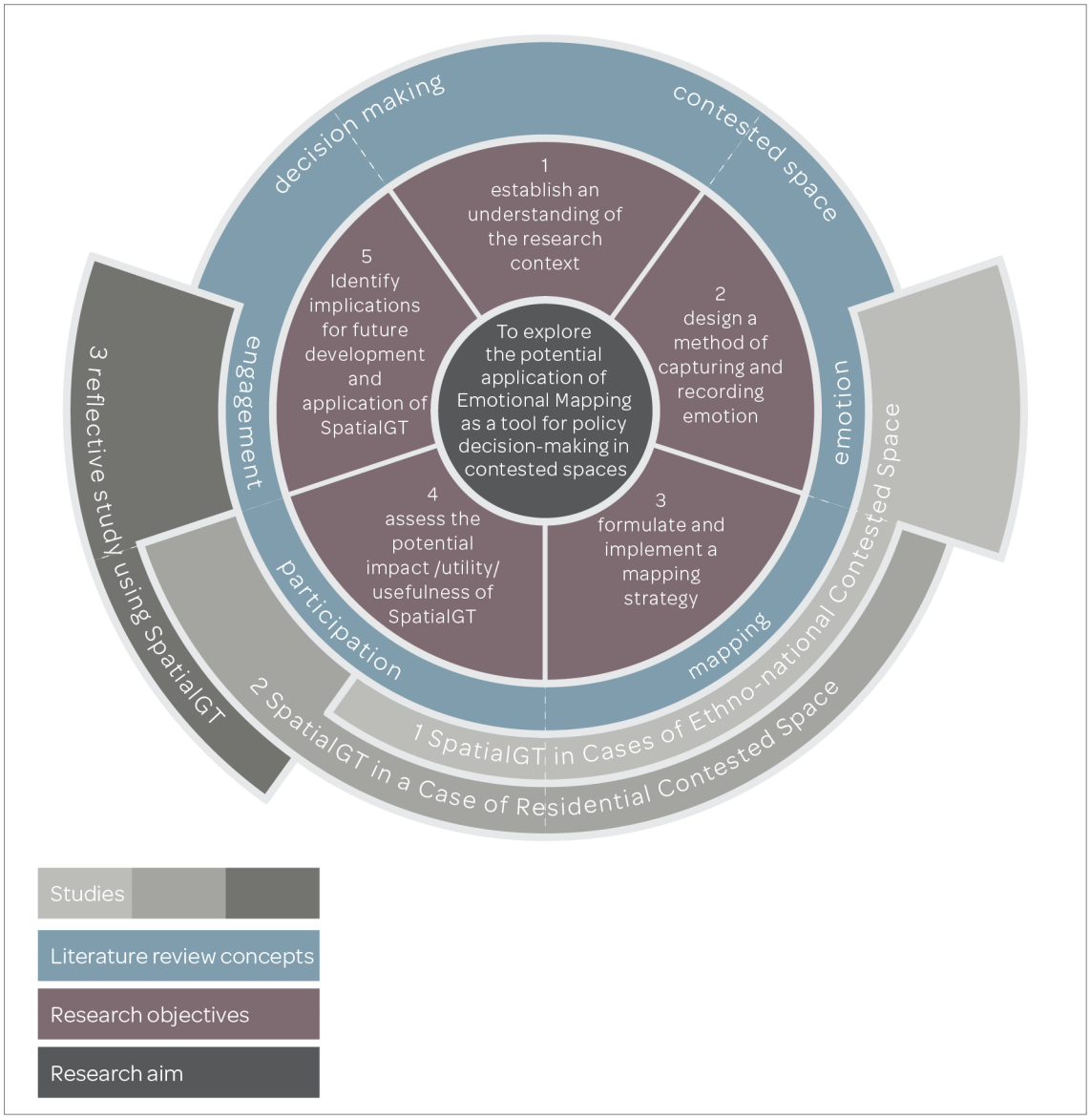


Figure 1-2 Thesis map showing aim, objectives, theoretical concepts and studies

The four key concepts; *emotion, mapping, policy decision making* and *contested space* appear in the literature review layer alongside other emerging concepts. In the case of Objective 1, a desk-based literature review research method provided

sufficient scope and richness to establish an understanding of the research context and construct a theoretical framework for emotional mapping, without occasion for conducting primary research. It can be seen therefore in the diagram that the axis of Objective 1 does not traverse any studies beyond the blue literature review layer, however, as captured in Figure 9-2 in the conclusion of this thesis, further desk-based literature review was prompted and informed by the studies, leading to the complete theoretical framework .

Objectives 2, 3 and 4 - which, together constitute the conceptualisation, testing and validation of the methodology as a new way to research emplaced emotion - do not map neatly onto a particular portion of this thesis, but are fulfilled across multiple chapters and studies. Desk-based research on emotion, mapping and site-specific issues was woven into the empirical studies to inform and triangulate the formulation process. For this reason, Figure 1-2 shows the axes of these three objectives spanning all three studies as well as the literature review layer. Objective 5 also necessitates literature and empirical input for its fulfilment but draws only on the final study because it is there that the necessary reflection and evaluation takes place. A pattern emerged in the constructing of chapters and studies in the thesis that necessitated continual reflection on what had gone before, in a two-steps forward-one step back sequence. Knowledge accrued, or constructed, at one stage was then tested and built upon in the next. This pattern reflects the iterative, emerging nature of the methodology employed, which is concerned with the grounding of information and interpretation in an ongoing, spiral movement.

1.5 Thesis Chapters

Chapter 2 charts a review of interdisciplinary literature spanning psychology, geography, planning and the social sciences that illuminates the four concepts of *mapping, emotion, decision making* and *contested space,* employing a strict interdisciplinary framework as a means to identify relevant literature. A theoretical framework emerged from this which is then used as the starting point for methodological formulation in *Chapter 3*. Here, ontologies, epistemologies, disciplinary norms and some specific methodological positions are deconstructed and reassembled in the form of the new proposed methodology, SpatialGT. This concludes the conceptual, formative work of the thesis.

Chapter 4 named "Study Design" acts as a bridge from the initial, conceptual part of the thesis in *Chapters 1-3* to the more experimental testing that follows by introducing the historic, social, spatial, political and cultural contexts of the empirical studies along with descriptions of how the new methodology was employed in each. The methodology was implemented across three different studies, where it was refined and tested.

Chapter 5 presents the test studies concerned with ethno-national contest. Two studies were conducted in interface locations, areas in North Belfast that have so-called peace walls. The second type of contested space to be explored in a test study was the Holyland, an area with high transient student and migrant populations and associated social issues. This is presented in detail in *Chapter 6*. Building on the mapped and other outputs of the previous studies, *Chapter 7* presents the final reflective study, conducted with policy decision makers and public sector mapping consultants. The focus of this chapter is to assert quality, fit and possibilities of the

mapped outputs in a real-life policy context. Discursive outputs are also explored for their value and relevance. These three chapters constitute the empirical work of this thesis, where SpatialGT is tested, refined and evaluated. The methodology evolves over the three studies and responds to different contexts and levels of engagement. Each chapter presents extensive visual and discursive findings, revealing a glimpse into the lived experience and expert knowledge of a wide variety of stakeholders.

Chapter 8 presents an evaluation of the methodology in its entirety, its performance in the test studies and its possibilities for future development. Findings from all three studies are brought together here to assess the usefulness, innovativeness and validity of SpatialGT as a new methodology for mapping emotion in contested space by way of evaluation criteria drawn from a number of interdisciplinary sources.

Chapter 9 concludes the thesis in two stages. Firstly it maps the research onto the Objectives 1-4 and secondly fulfils Objective 5 by presenting the implications for future development and application of SpatialGT.

Chapter 2 Literature Review

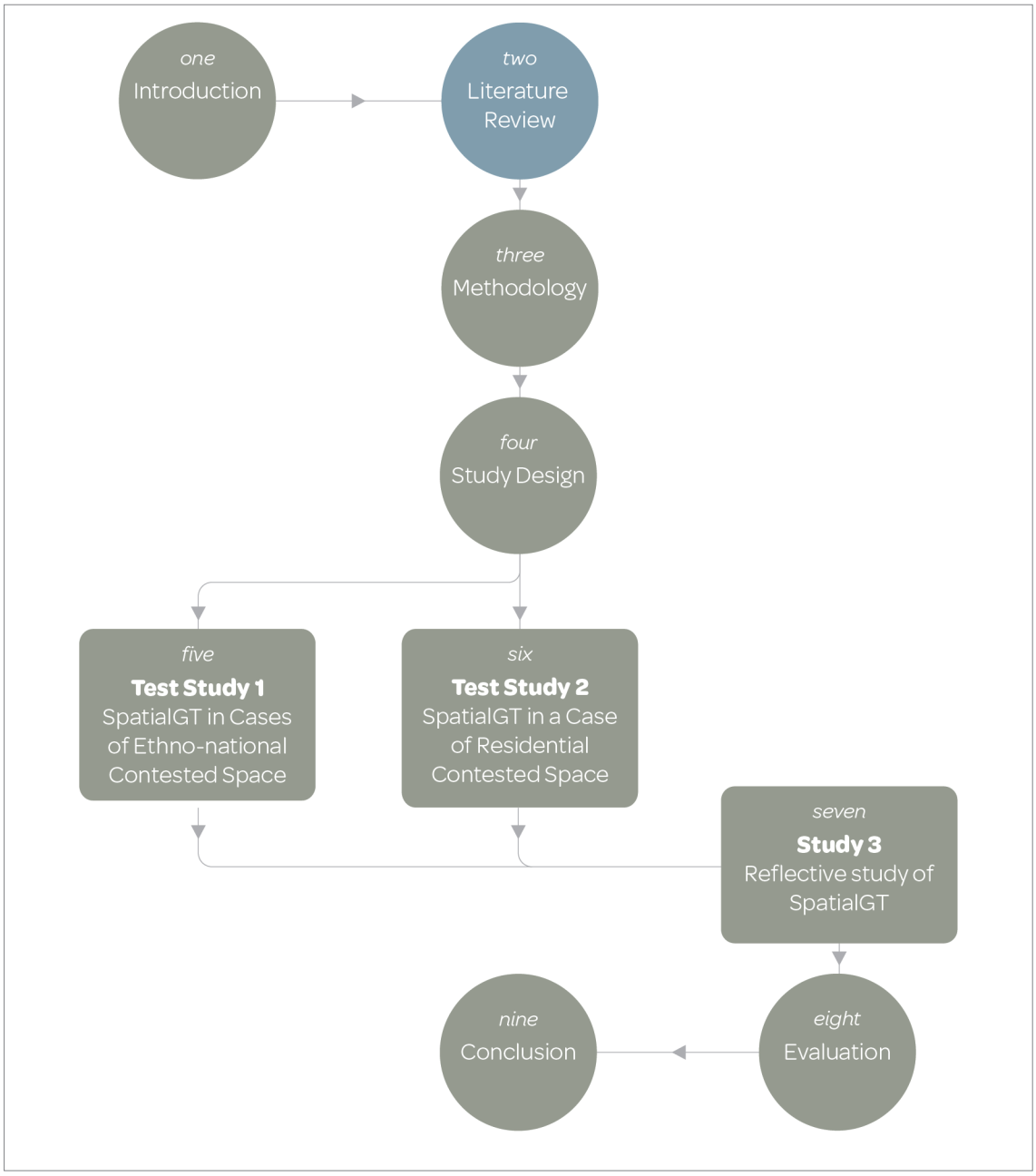


Figure 2-1 Diagram showing all thesis chapters (ii)

2.1 Introduction

This chapter frames the academic context of emotional mapping by reviewing the relevant literature from a variety of disciplines and establishing what is and is not

known about the area of emotional mapping in contested space, setting the scene for the methodological exploration that follows (see Figure 2-1 above). It presents an analysis of foundational and contemporary literature in the areas of *emotion, mapping, policy decision making* and *contested space* in order to define the relevant topic areas, debates and theoretical underpinnings that exist in the spaces between these discrete disciplines. These four concepts are the cornerstones of this thesis. In contemporary literature, there is an increasing intersection between them, whereby planning becomes more emotional, decision-making more deliberative and emotion more situated (Othengrafen, 2012; Burns & Skupin, 2013; Hickey, 2014). Amongst these interconnections, emotional mapping is located, triangulated by these cornerstones and defined by rich, interdisciplinary dialogue. This chapter offers an insight into the possibilities of taking an interdisciplinary approach to explore the overlaps and spaces between planning, social sciences and geography and helps locate emotional mapping in relation to these disciplines.

Given the methodological focus of this thesis, this literature review draws not only on critical and theoretical content of the literature but also on the methodological and epistemological in a bid to set the scene for research potentials beyond traditional positivism within planning. The subsequent chapter builds on this methodological heredity and develops a unique method for this work called SpatialGT.

As explained in *Chapter 1*, this literature review plays a part in fulfilling all thesis objectives, but Objective 1 - *establishing an academic context for the research* - in particular is addressed here. It provides a research rationale by:

- Identifying key issues involved in a critical definition of emotion within contest

- Situating such definitions within a broader interdisciplinary literature.

The mapping of emotion is an interdisciplinary enquiry. Before proceeding to an examination of the literature, interdisciplinarity is discussed here with reference to its historiography and its position in contemporary planning discourse.

Interdisciplinarity is defined as interaction among different bodies of knowledge or research practice (Committee on Facilitating Interdisciplinary Research et al., 2005). Interdisciplinary research was conducted, albeit under no such label, before the division of the disciplines as recognised today. The division occurred around the beginning of the nineteenth century. Previous to that all aspects of academia - mathematics, medicine, philosophy, literature, science etc. - were studied and developed in an integrated way. On academic discourse of the seventeenth century, Calhoun (2001) commented that "Hobbes and Locke could integrate politics and psychology without need for an interdisciplinary field of political psychology" (p.4).

Specialisation and separation as a response to the overwhelming amount of new knowledge accruing in the 1800's, a shift from experiential to abstract knowledge generation and the focus on *problem* as opposed to *object* (Weingart, 2010).

Disciplines are categorised and defined in a variety of ways. Chettiparamb (2007) summarises three key distinguishing characteristics thus:

> *...the first emanates from a scientific-epistemological approach and distinguishes between concepts, methods and ways of knowing that are specific to a discipline. The second discerns ways in which the disciplines come to be socially embedded and practically realised with respect to a larger external society. The third takes a more organisational view, focusing on how knowledge is institutionally organised and structured. (p.3)*

Heckhausen offered a different taxonomy, based on seven criteria: the material field, subject-matter, level of theoretical integration, methods, analytical tools, applications of a discipline in fields of practice and historical contingencies (Heckhausen, 1972, p.83). Bridges posited that the claim of a "rule governed system of enquiry" in a given school of thought "when such discipline is sufficiently well developed and differentiated enables us to refer to the system as a discipline". (Bridges, 2006, p.8). Distinctions between disciplines are maintained to the present day in myriad ways; through the training of undergraduate students, publications, review processes and social connections.

These are just a few examples of attempts to delineate, define and otherwise draw distinctions between disciplines, an area of study in itself. However, boundaries are continuously changing due to the expansion of bodies of knowledge within disciplines. In this way, the expansion of one discipline might naturally overlap with that of another. This overlap is of particular interest here, as it locates the academic position taken by this thesis as interdisciplinary innovation.

Huutoniemi (2010) highlights the discursive themes around measuring the quality of interdisciplinary research. Two of these themes are the contextualisation of problems and social accountability of knowledge, which are becoming as important as traditional modes of scientific measurement and reliability not only in interdisciplinary research but within disciplines too. She concludes that evaluation of research generally must evolve to respond to the shifting context of the current age - a 'knowledge society' - moving toward a monitoring more than measuring approach that values the local, subjective and personal. The key challenge of interdisciplinary research is to overcome the conceptual and methodological boundaries between

the prevailing fields of research (ibid.). Establishing a contiguous research agenda across discrete disciplines presents unique problems. This interdisciplinary study might be characterised as broad interdisciplinarity, in that is spans fields that have disparate conceptual and intellectual attributes. The broad scope approach of this thesis has particular problems associated; the principal concern is the challenge of integrating epistemological differences in framing a new interdisciplinary field or sub-field. In order to overcome this challenge, this literature review takes as its starting point, the areas of overlap between the four key concepts of emotion, mapping, decision making and contested space. For example, rather than include each and every theoretical model of emotion within disciples such as psychology, what is presented here is the occurrence of affective research in traditionally non-emotional disciplines such as geography, planning and technology. Additionally, in place of a brief history of planning and space, a discussion of the 'spatial turn' (Shoval et al., 2014) in traditionally non-spatial disciplines is given. The diagram below in Figure 2-2 illustrates the overlaps that will be explored. It should be noted here that *emotion* and *mapping* have been illustrated as larger circles here, signifying their greater importance in the literature. Issues of *decision making* and *contested space* are secondary to the main focus of this thesis, namely, emotional mapping.

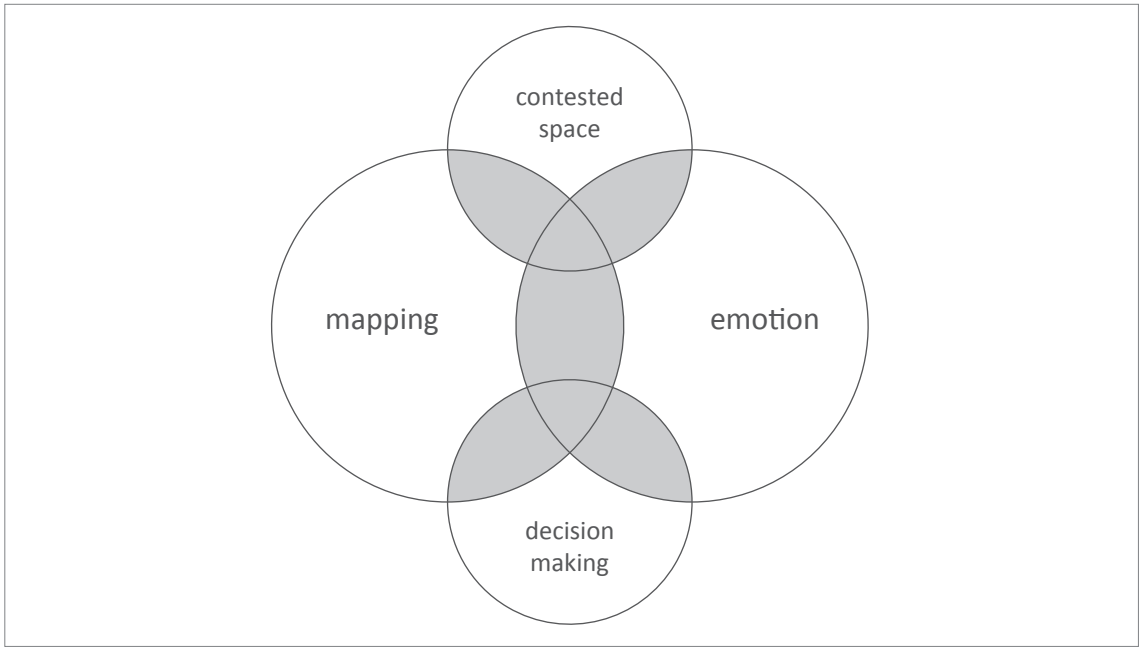


Figure 2-2 Overlapping literature concepts

Relevant literature is explored in the following three sections. *Section 2.2* and *section 2.3* present literature overlapping with emotion and mapping respectively. In *section 2.4*, a more detailed exploration of academic discourse on emotion with regard to mapping is given. It is here that the immediate literary context for emotional mapping is defined. (Note, due to the iterative nature of the work of this thesis, further literature is incorporated into the final theoretical framework and is illustrated in Figure 9-2 on page 302.)

2.2 Emotion, contested space and decision making

> *Everyone knows what an emotion is, until asked to give a definition (Fehr & Russell, 1984, p.464)*

The emphasis of this section (see Figure 2-3) is on how qualitative research on emotion is explored in literature on decision making and contested space which is

traditionally unconcerned with emotion. Literature is selected on the basis that it straddles two or more methodological approaches or knowledge bases. It seeks to map a number of approaches to conceptualising emotion in such fields as human geography, critical GIS, human computer interaction and cartography.

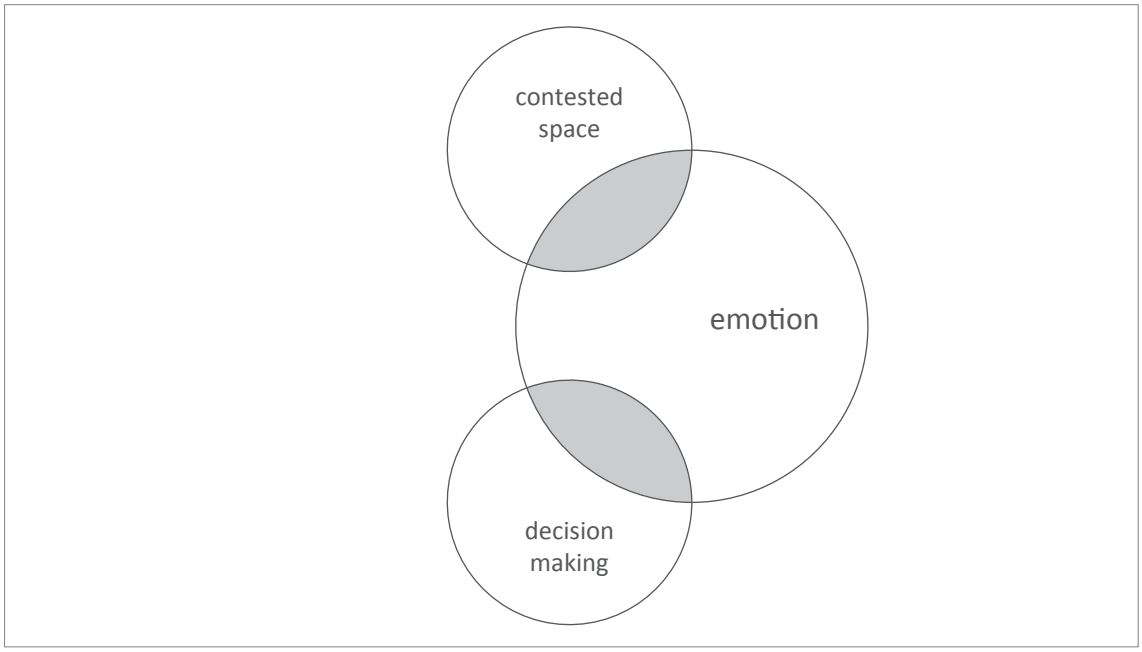


Figure 2-3 Diagram of key concepts for discussion - emotion, contested space and decision-making

Such diverse philosophers as Spinoza, Darwin and Freud were concerned with the exercise of establishing what emotion is. There is a vast volume of research on the subject. In some discipline the, taxonomies, intensities, emotional expression, recognition, categorisation e.g. love, joy, anger, sadness, fear, surprise (Shaver et al., 1987) and polarisation e.g. melancholic-contented; despairing-hopeful; bored-relaxed (Bradley & Lang, 1994) of discrete aspects of emotion form major parts of the work. Scherer (2005) asserted that, of emotion, "the number of scientific definitions proposed has grown to the point where counting seems quite hopeless" (p.696). Other writings take a more philosophical view of affect and its significance

to academic thought, less concerned with the specifics of emotional states and more with how emotion effects our position in the world. Thrift described affect as a way of thinking or knowing, as "a different kind of intelligence" (Thrift, 2004, p.60). It is this reading of emotion, as a way of knowing, being, and having capacity to act and being acted upon (Siegworth & Gregg, 2010), that is the starting point of this thesis' understanding of emotion.

There is an emerging understanding of emotion as a social construct that displays cultural variations much like any social entity. The image in below Figure 2-4 illustrates geo-cultural variation in the lexicons of emotion, across several languages.

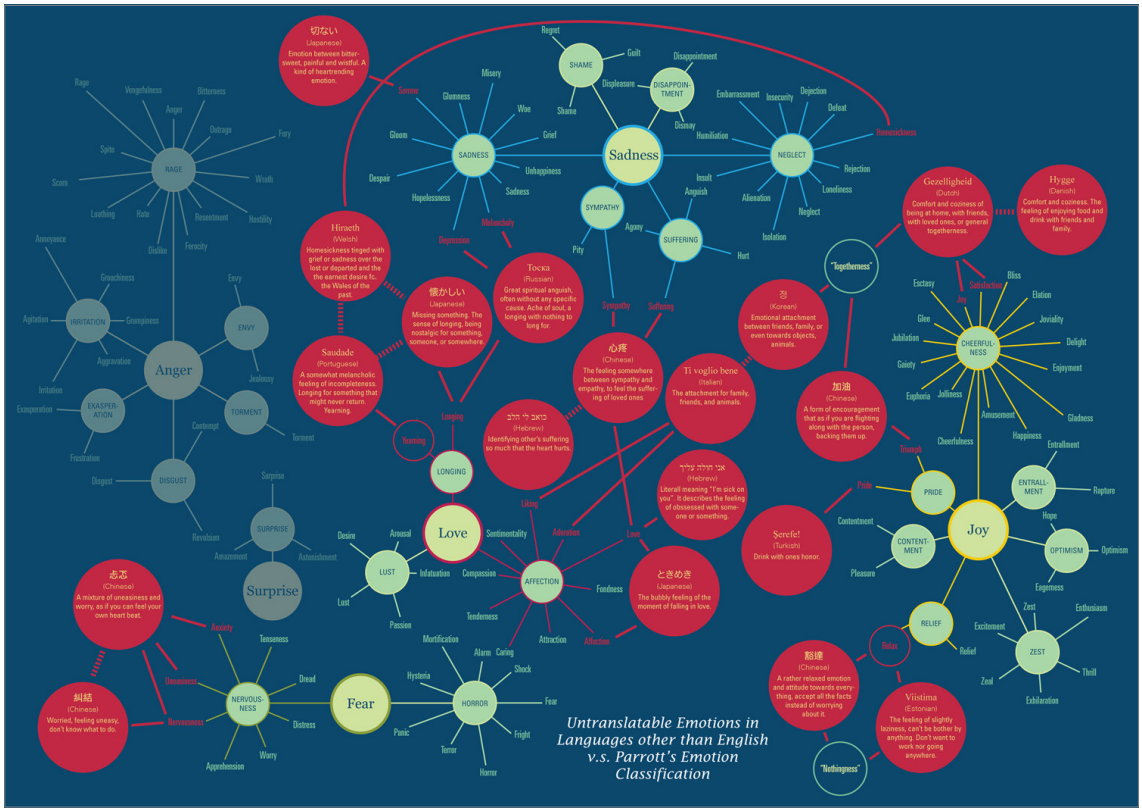


Figure 2-4 Untranslatable Emotions in Languages other than English, v.s. Parrott's Classification by Pei-Ying Lin (Lin, 2013)

A companion visualisation by Lin which shows Parrott's classification (Parrott, 2001) expanded to include "Five Emotions Invented By The Internet" (Alexander,

2011) is an equally powerful visual representation of the growth of an emotional lexicon in a relatively short time period. Significant academic shifts in regard to emotion have also occurred rapidly in the last forty years.

Preliminary research carried out in an effort to define and categorise emotions revealed that this is a task of epic scale. There is no consensus on the definition or classification of emotions in academia. Cultural, spatial, historic and epistemological contexts overlap and shift perspectives on the significance of the study of emotion. There are few published literature sources in the field of planning that reference emotion. However, there is a wealth of literature from traditionally positivist disciplines relevant here that call for a more qualitative research approach to be employed (Davoudi, 2006; Thrift, 2004; Young & Gilmore, 2013) to reflect changing understandings of society and knowledge. This suggests that there is at least a will to explore integration of differing epistemological stances as a means to extend the discourse.

Thien (2005) identified a shift in academic development in the twenty-first century whereby an "increasing attention to emotion is rippling through the forefront of critical thought, bringing questions of affect to the forefront" (p.450). The last twenty years have brought new writing across geography, social sciences, technology and the arts that engages with affective realities in theory and practice. This work was later referred to as the 'affective turn' (Clough & Halley, 2005) or the "emotional turn" (Boehner et al., 2007; Davidson et al., 2005). These turns challenged traditional scholarly notions of emotions as disruptive to logic and impairing of judgement, and questioned the ethics of knowledge that was based on emotional vacuum (Anderson & Smith, 2001). Study in emotion in geography, known as emotional geography,

moved beyond the Cartesian model of the body in space, devoid of values or bias towards a focus on the individual as distinct from the 'public' as the object/subject of affect, which Thien described as offering more promise for "politically relevant, emphatically human, geographies" (Thien, 2005, p.450).

The field of Human Computer Interaction has evolved theories of cognition and emotion in its own emotional turn since the 1980's, along with new methods of measuring emotional states (Isomursu et al., 2007). New technologies emerged, allowing for innovative affect measurement, which in turn prompted study and debate about our understanding of human emotion. Current scientific understandings of emotion consider the effect of emotion on context as well as the context's effect on emotion. Boehner et al. (2007) asserted that "not only is the experience of emotion mediated by cultural and social situations, it is also used to enact and sustain those settings" (p.280). This work - positioned in the field of affective computing - identified emotions not as discrete and personal experiences but as social phenomena. It demonstrated "how this model leads to new goals for affective systems" (p.275). It concluded that not only is our understanding of emotion culturally constructed but emotion does 'cultural work'. This concept of emotion 'doing work' echoes new ways of thinking about mapping, as discussed later in this chapter.

2.2.0.1 The importance of emotion in planning policy decision making

The first substantive examinations of the role of emotion in relation to space in contemporary academic literature were by Tuan (1974), Buttimer (1976), and Relph (1976, 1981, 1993) who became collectively known as "humanistic geographers" (Seamon & Sowers, 2008). Relph and Seamon employed Phenomenology in their

exploration of users' experience of space. Phenomenology is defined as "the study of phenomena as experienced by man" with the "primary emphasis ... on the phenomenon itself exactly as it reveals itself to the experiencing subject in all its concreteness and particularity" (Giorgi, 1971, p.9 cited in Seamon, 1979, p.16). Employing this psychological methodological position in relation to the study of space and place, the work of these humanistic geographers is perhaps the primary precedent for the type of research employed in this thesis.

In developing his phenomenological approach to place and space, Relph used a concept of *insideness* and *outsideness*, extended by Seamon as "everyday environmental experience" (1979) to classify a variety of spatial experiences based on the "intensity of meaning and intention" of an individual's sense or feeling of a place in relation to themselves. The use of the experiential led directly to a way of describing spatial experience. It is hoped that in this thesis, emotion in relation to spaces of contest can help to draw out unique themes and insights that lead to new understandings of those spaces.

There are several dimensions of emotionality to be considered in policy decision making:

- emotion helps us learn from our experiences and ourselves, and as an aid to personal decision making is "often as reliable as careful, rational planning (Laybats & Tredinnick, 2016, p.205)
- affect is "what causes us to act, to bond with others, to laugh together" (Young & Gilmore, 2013, p.816)
- affect is our capacity to act and be acted upon (Siegworth & Gregg, 2010)

These three concepts work at different scales in relation to the individual, or the body in space. In the first, our emotionality shapes what we believe, learn and do.

In the second, the individual finds an emotional landscape in which to interact with others. In the third, the body shapes its environment and is shaped by it thereby - in effect - fully living. If it is in a person's interest - emotionally speaking - to act and be acted upon in the world, then the extension of this argument into planning in the built environment would require that they play a part in the shaping of their environment in order to direct their own lives in that space. Harvey (2003) touched on this relationship between this capacity to shape our world and ourselves simultaneously when he wrote about "...an active right to make the city different, to shape it more in accord with our heart's desire, and to re-make ourselves thereby in a different image" (p.939).

The relevance of citizen involvement/engagement with policy making has long been linked with well-being. *In How's Life? Measuring Well-being*, Organisation for Economic Co-operation and Development (2011) listed *civic engagement* among eleven factor defining well-being globally, alongside income, housing etc. (see Figure 2-5 below for a list of all factors).

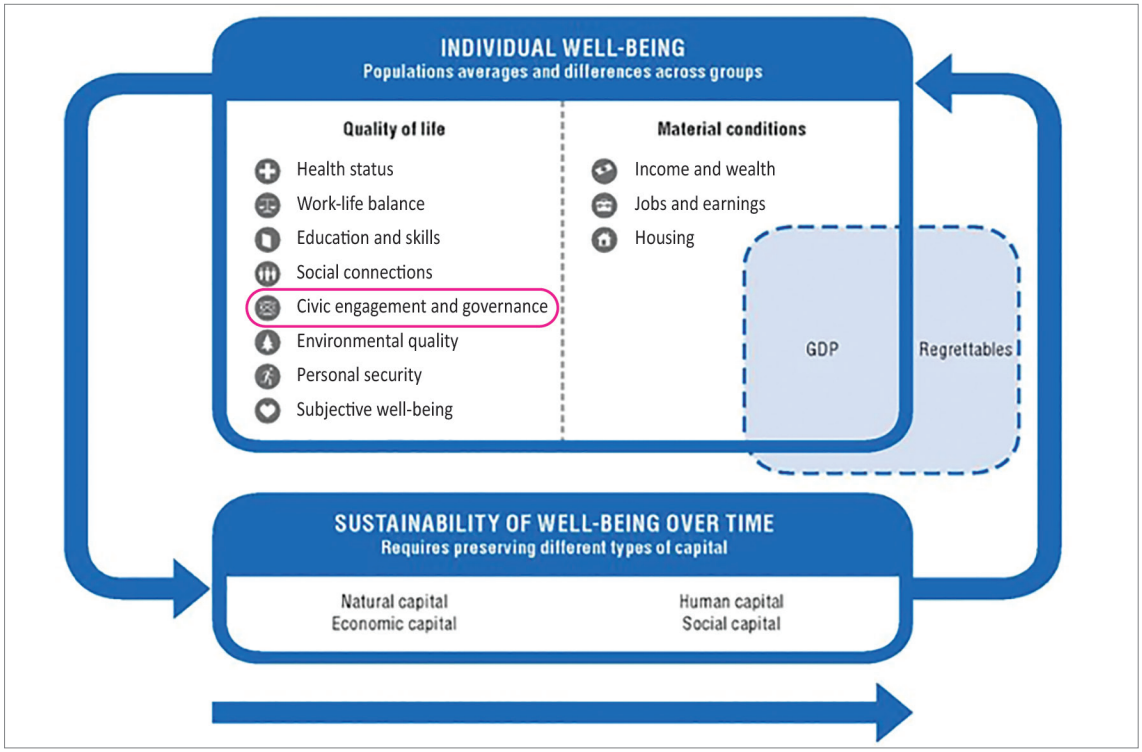


Figure 2-5 OECD Framework for measuring well-being and progress (OECD, 2011)

2.2.1 Emotion in planning

The following references illustrate how emotion - and the epistemological positions that support emotional thinking - is considered by some planning academics. Ferriera (2013) made a call for a mindfulness-based approach to planning practice, on the basis that the emotionality of the planner comes to bear on their practice in in terms of "creativity, learning, social interaction, resource allocation, decision-making processes, irrational beliefs, job satisfaction and productivity" (p.704). Fischer (2010) examined emotionality in policy deliberation, democracy and experimentation. He identified the lack of consideration of emotion in these fields and suggested that emotions have 'typically been portrayed as a barrier to reasoned judgment' (p.407). Exploring social and psychological aspects of deliberative communication, especially its role in constructing social meaning, he concluded by

outlining a practical approach for integrating reasoned deliberation and emotional expression based on real-world planning and policy processes. In a review of the contemporary dominant positivist paradigm in planning, Davoudi (2012) identified:

> *the enormity of the challenge for the planning discipline and profession to embrace the interpretive approach to spatial thinking. Translating a new relational understanding of space and time into the realm of planning practice requires a 'paradigm' leap (p.439).*

These examples show that there are spaces or - to borrow Pavlovskaya's term (2006) - openings within planning practice, theory and deliberation for different, affective approaches but also that there is much work to be done to embed these new models.

2.2.2 Emotion in contested space

The term 'contested space' appeared in academic literature as early as 1975 (Ley & Cybriwsky, 1974), growing in usage between then and the present day. The types of space discussed in this literature range from outer space (Harrison, 2013) to psychological spaces such as childhood learning (Raban and Scull, 2013). The range spans many aspect of physical space such as the political, virtual, social, national, gendered and touristic (McLennan et al., 2014) and touches on virtual (Wilkinson, 2011) and theoretical space (Marshall, 2011) as well. In some cases, 'contested space' refers to a conceptual location within a discourse where meaning or value is contested, for example, Marshall (2011) used it as a signifier for global citizenship, described as a "politically contested and instrumental concept" (p.412). Such non-spatial uses of the term are considered here to demonstrate the multiple layers of meaning that are attributed to this one term. Whilst the word relates primarily to the physical, we use the word space in many contexts, mostly to distinguish or

discern one thing from another, or the distance between them. As in the examples above, space might be temporal, emotional, idealogical imagined. In poetry, language itself is described as "a distancing act" (Boening, 2016). Perhaps when we speak of contested space, we are not referring solely to the Cartesian concept of space alone, but also the other layers of meaning, language and experience that set one thing apart from another in those spaces.

The following discusses contested space as a term attributed to physical and social locations of conflict. The nature of the contest might be gender, power, religion, ethnicity, sovereignty, economy, ideology, nationality, culture etc. Several attempts are made at drawing distinctions between types of contested space. Brand et al. (2008) distinguish between two types of contest. The first type - *pluralism* - is concerned with class, race and ethnicity divisions, while the second - *sovereignty* - is where there is "a long-standing dispute about the sovereignty and legitimacy of the state itself" (ibid., p.4). This echoes Morrissey & Gaffikin's distinction, that is, "between a sovereignty and pluralist perspective" (Morrissey & Gaffikin, 2006, p.874). Looking specifically at Belfast as the context for this thesis, the principle source of conflict between the two main communities of identity arises from the polarised opinions on the validity of sovereignty of Northern Ireland, as part of the United Kingdom and/or part of the Republic of Ireland. Conflicting ethno-national positions are inscribed on the urban landscape. Single-identity zones dominate the city, visually marked by flags, murals and other emblems of nationality. The edges of these zones are in some places marked with peace walls, in others, no man's lands, buildings or highways. Such segregation provides some safety for communities in a conflicted context, whilst reinforcing and preserving cultural and group identities.

Provision of services to these parallel neighbourhoods is also divided, and is estimated to cost £1.5 billion in direct, indirect and opportunity costs (Deloitte, 2007). Bollens (1999; 2001) describes the planning approach in Northern Ireland as a "neutral approach", with decision makers as neutral participants assuring that "government policy does not exacerbate sectarian tensions" (Bollens, 2001, p.3). Such an approach, blind to an imbalance of need in the different communities - in particular the housing needs - is criticised, whereby policymakers are accused of condoning "the strict territoriality of the city, one that imposes tight constraints on the growing Catholic population while protecting underutilized Protestant land" (Bollens, 2001, p.3). The history of the conflict in Northern Ireland and its relevance to this thesis is discussed in more detail later as a prelude to the test studies. Additionally, more information on issues such as studentification and immigration that contribute to the contrasting pluralist contest are explored later. Here though, the literature identified makes a call for a more subjective hearing of the multiple narratives that exist in contested spaces.

Re-examining the role of knowledge within planning theory, Rydin (2007) claimed that:

> *This new orthodoxy clusters around the idea that the core of planning should be an engagement with a range of stakeholders, giving them voice and seeking to achieve a planning consensus (p.54)*

This is reiterated in the opinions of strategic decision makers interviewed in the course of the reflective study. The challenge is to find ways to incorporate emotion and perception into a traditionally positivist profession. Davoudi (2006) refers to this as the Enlightenment Model, whereby "the emphasis is on providing a deeper

understanding of the conditions within which different interventions might be effective. Under this model, the emphasis is on *evidence-informed* policy rather than evidence-based policy" (p.16). A shift to evidence-informed policy might create an opportunity in decision making to respond to less quantifiable information such as emotion.

2.3 Mapping, space and decision making

This section examines interdisciplinary literature on policy, contested space and decision making that has a spatial or mapped dimension (see Figure 2-6). Mapping is explored from several perspectives: as a tool for the display and gathering of data, as a method of analysis and from a critical perspective to consider the implications for this interdisciplinary study.

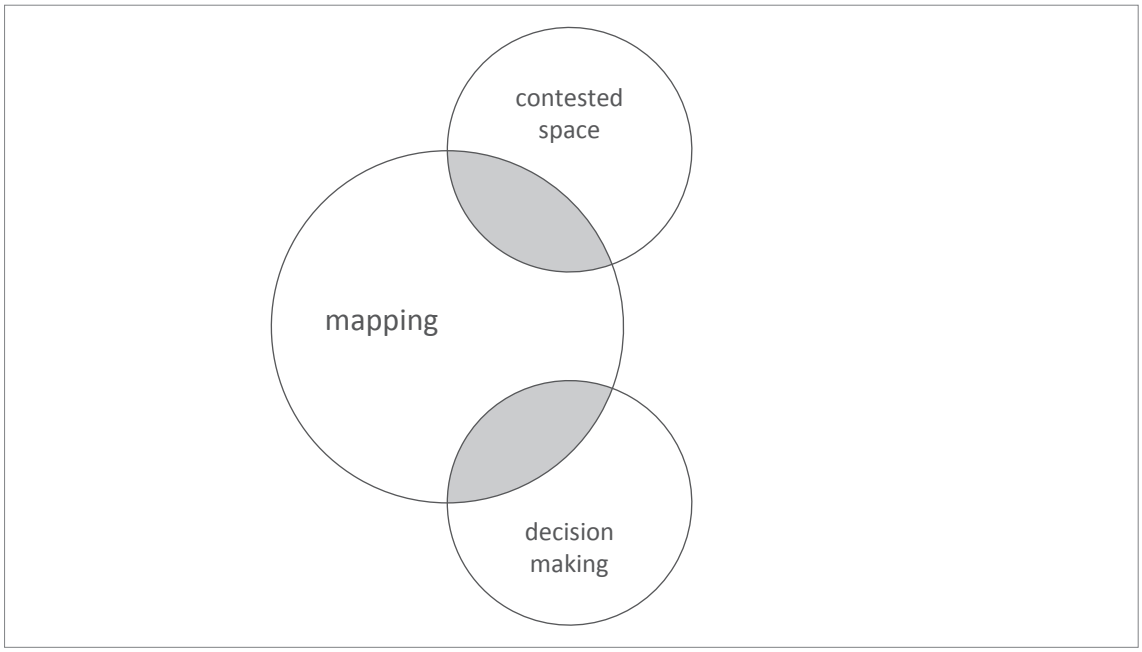


Figure 2-6 Diagram of key concepts for discussion - mapping, contested space and decision-making

Maps are spatial narratives. They communicate a story, be that political,

meteorological, geological or emotional. They are not objective statements of facts, but a carefully crafted selection of data, in particular colours, scales and symbols to construct a particular reality.

Mapping has a long history of informing policy decision making. John Snow's Cholera map of Broad Street, London (see Figure 2-7 below) is a famous, early example of data mapping intended to influence policy. This map, alongside extensive anecdotal evidence, was the basis of Snow's compelling argument that cholera was a water-borne disease. His efforts in this regard helped to shape the field of epidemiology.

Figure 2-7 Map showing cholera deaths near the Broad Street water pump in the 1854 outbreak. Based on John Snow's 1855 map (Snow, 1855)

In this example, the map was used as a visual tool to illustrate a particular clustering of data and to lend weight to a particular theory. The narrative of the

map tells that there is a correlation between the location of the pump and the high number of nearby cholera deaths, thereby arguing for a causal relationship between water and the disease. The interpretation was provided by Snow in the prose of his book *On the Mode of Communication of Cholera* (Snow, 1855). However, this spatial correlation was later reinterpreted by a contemporary as looking "more like the effect of an atmospheric cause than any other" (Parkes, 1855). This example illustrates how spatially located information can help to construct an argument or counterargument, depending on the interpretation.

Current discourse in critical GIS and cartography (Kingston et al., 2000; Al-Kodmany, 2001; Carver et al., 2001; Carver et al., 2004; Kingston, 2007) responds to the changes in mapped data sources and uses, reframing and reinforcing the role of maps as a "powerful mediator of spatial knowledge, social and political power" (Elwood 2006, p.693), concerned more with the sense of maps having arguments, not just being "neutral descriptions of the world, but active participants in the discussion about that world" (Mallonee 2013). Kitchin et al. reiterated this understanding, claiming maps are not just representations but inscriptions, stating that "they capture something of the world whilst simultaneously doing work in the world; they precede and produce the territory they purportedly represent" (Kitchin et al., 2013, p.481). Kitchin & Dodge (2007) considered the relationship between map and mappings, asserting that "maps are transitory and fleeting, being contingent, relational and context-dependent; they are always mappings; spatial practices enacted to solve relational problems" (p.331). This is further elaborated by Kitchin et al. (2013) by situating academic mappings among "a range of discursive forms" and considered them "not always the end point of a piece of an analysis, but a conduit through which to

move on to new, complementary research and disseminate findings" (p.491). In this sense, the process of mapping becomes an important narrative alongside that of the map. This point is particularly pertinent in this thesis, where mapping processes are central to the construction of a new methodology.

2.3.2.1 Engaging, empowering and participating

There are myriad procedures by which public participation occurs, at various degrees of engagement: referenda, public hearings, inquiries, public opinion surveys, negotiated rule making, consensus conference, citizens' jury/panel, citizen/public advisory committee, focus groups (Rowe & Frewer, 2000). Arnstein's time-honoured 'Ladder of Citizen Participation' in Figure 2-8 below offers a binary framework for ordering degrees of participation, on a spectrum from citizen power to non-participation.

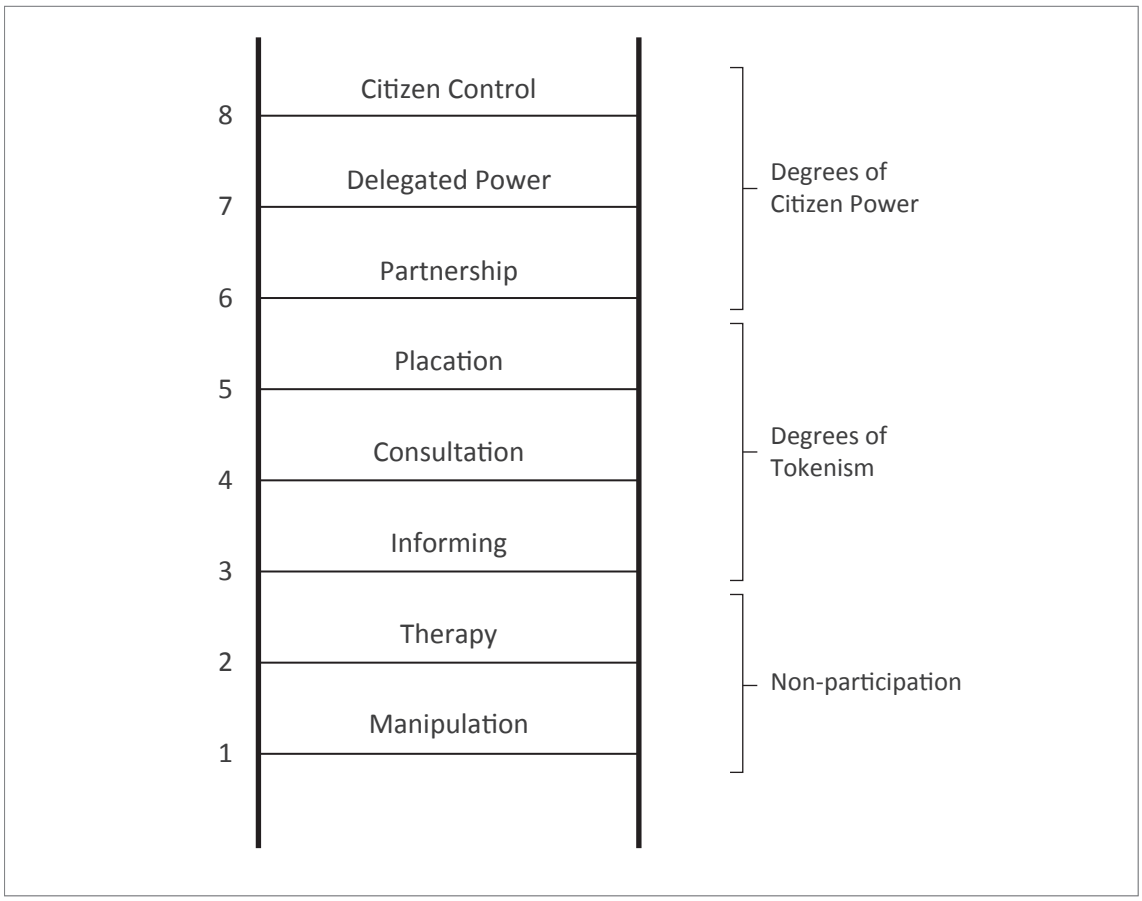


Figure 2-8 Eight Rungs on a Ladder of Citizen Participation (Arnstein, 1969, p.217)

Arnstein (1969) notes that levels of participation cannot be considered so neatly and in reality are more numerous, nuanced and blurred. She noted too that::

> *"the typology does not include an analysis of the most significant roadblocks to achieving genuine levels of participation. They include racism, paternalism, and resistance to power redistribution" (p.217).*

The ladder was adapted by Wiedemann & Femers (1993) as illustrated in Figure 2-9 below.

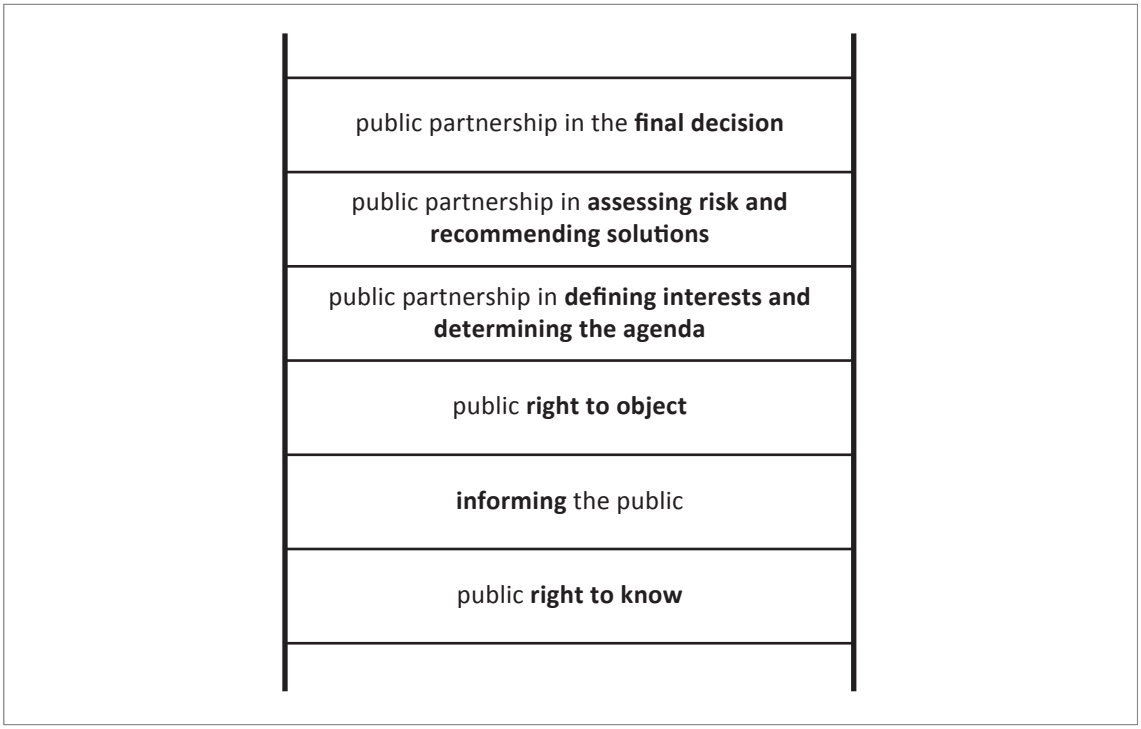


Figure 2-9 Public participation ladder (Wiedemann and Femers, 1993, p.357)

Claims have been made that the uses of Participatory Geographic Information Systems (PGISs) by disadvantaged groups can be empowering by enabling community groups and members to communicate local information and world views, using the commonly recognized language of cartography in a way that might influence decision-making processes related to land use and planning. However, others claim that PGIS is disempowering due to the cost and complexity of the technologies, inaccessibility of data, restrictive representation of local geographic information, and the often low levels of community participation (Corbett, Keller 2004).

Discussing the role of public participation in public decisions, Thomas (1995) asserted that "more often than not, the impetus for public involvement comes from a need to obtain acceptance as a prerequisite to successful implementation" (p.113).

In a critique of participatory practices and processes, Irvin and Stansbury (2004) list the following among disadvantages of citizen participation in government decision making processes: "time consuming, pointless if decision is ignored, costly, may backfire, creating more hostility toward government" (p.58). Conversely, critical GIS has explored the power of participation to empower communities through their engagement in decision making process and this has been a thread in much research.

In addition to the role of maps as tools for communicating data and telling a story, contemporary mapping plays another vital role in relation to policy - to engage. There is a growing body of work exploring the potential for participatory online systems to "bring the public closer to a participatory planning system" by informing and engaging the public (Kingston et al., 2000). Carver (2003) claimed that empowerment "is the process by which stakeholders identify and shape their lives and the society in which they live through access to knowledge, political processes and financial, social and natural resources (p.62). There are various models which seek to categorise and measure the empowering effect of participatory spatial research (Elwood, 2002; Corbett & Keller, 2004).

More recently, co-production is an approach used in healthcare that brings together service providers and users in a collaborative relationship "whereby service recipients are involved in different stages of the process, including planning, design, delivery and audit of a public service" (Realpe & Wallace, 2010, p.7). There are some recent academic studies of co-produced environmental projects that discuss the merits of this iterative knowledge-production (Steyaert et al., 2007; Edelenbos et al., 2011). Co-production recognises lived experience as a type of expertise. It responds to the call for new ways of thinking about knowledge production itself, towards a model

of a 'knowledge society', overturning the traditional deficit model and neutralising imbalances in knowledge distribution across gender, ability etc. The model of engagement in co-production presents a new perspective to the traditional hierarchical ladders of participation. While co-production is not employed as a mechanism in the studies within this thesis, the participatory interrelationship it proposes is of more relevance than the traditional top-down ladder model. By actively seeking to uncover, represent and inscribe emotional knowledge on contested spaces and formalising this in a mapping process, it is hoped that those most affected by the consequences of policies will find a voice beyond consent. An outcome might be a redrawing of the ladder of participation that reflects contemporary participatory practice, modes of engagement and aspirations.

2.3.2.2 Methods of mapping engagement

With the advent of Web 2.0 technologies, the proliferation of smart devices, and GPS, the general public has to an extent claimed the role not only of map user but of cartographer. It is possible to add information to a variety of maps now digitally and to explore datasets using bespoke filters, depending on the users' interest. GIS are incorporated into an ever-widening array of public and private systems, from land and property services, emergency services, navigation, social networking, retail etc.

With the emerging fields of crowd-sourced mapped data and availability of geo-spatial information sources as well as the democratisation of cartography generally, there is a growing familiarity in the general public with mapped data. We are more engaged with GIS technology in daily life via smart phones and other

devices for the two-way flow of geo-spatial data on; property, crime, directions, emergency services, transportation, utilities, accessibility, advertising etc. (Kingston et al., 2000). In the field of mapping, experts and non-experts exchange ideas and information bi-directionally. The use of participatory mapping has exploded in the climate of day-to-day map use and creation, which is extending the reach of digital cartography to groups, individuals and locations and issues that were previously excluded (Bugs et al., 2010).

The field of participatory GIS is well explored in academic literature (Hudson-Smith et al., 2009). There are many examples of the application of GIS models in real-life situations, offering insights into the advantages and difficulties of GIS as a tool for engagement. Steve Carver and Richard Kingston are among the leading proponents of participatory GIS in the UK and have published extensively on the topic. Their work into GIS and decision making is positioned in the early 2000s. By 2003 however, Carver (2003) seemed less enthralled by the possibilities of Participatory GIS as a process. On the future of participatory approaches using GIS, his assertion was thus: “a better understanding of individual and group decision behaviour is clearly needed, especially when complicated by the addition of geographical space” (p.64). Here, a juncture emerged in the development of mapping as a tool of engagement. Cartographers could no longer employ the usual mapping strategies when different social, political, economic and cultural contexts required new considerations, particularly around decision making. This was perhaps due to a belief that true participation should have an impact on decisions made about the communities involved.

This growth in cartographic skills, accessibility and usage shifts the voice of

the narrator from expert to user. Digital mapping technologies have widened accessibility to mapping as a narrative tool, giving spatial representation to marginal voices. This 'distributive change', from traditional institutions to the public as the curators of mappings is an aspect of their empowering nature (Elwood, 2002). It is important to note on the other hand, that financial, skill and informational restraints on cartography can marginalise individuals and communities. Anderson & Smith (2001) identified a "gendered basis of knowledge production (as) probably a key reason why the emotions have been banished from social science" (p.7). With the expansion of mapping authorship and alternative knowledges it is hope that there is more room for reflection on all aspects of emotion that come to bear on mapping. There is inherent value in these mappings as it "enables development of alternative knowledge and its inclusion in decision-making" (Elwood, 2002, p.907).

2.4 Emotional Mapping

This section looks to methods and outputs in the literature that deal with emotion and mapping, and seeks to define the immediate 'emotional mapping' literature gap (see Figure 2-10). Additionally it looks at qualitative and critical GIS practice and discourse, identifying quantitative and qualitative underpinnings to mapping processes and compatibility across different research approaches.

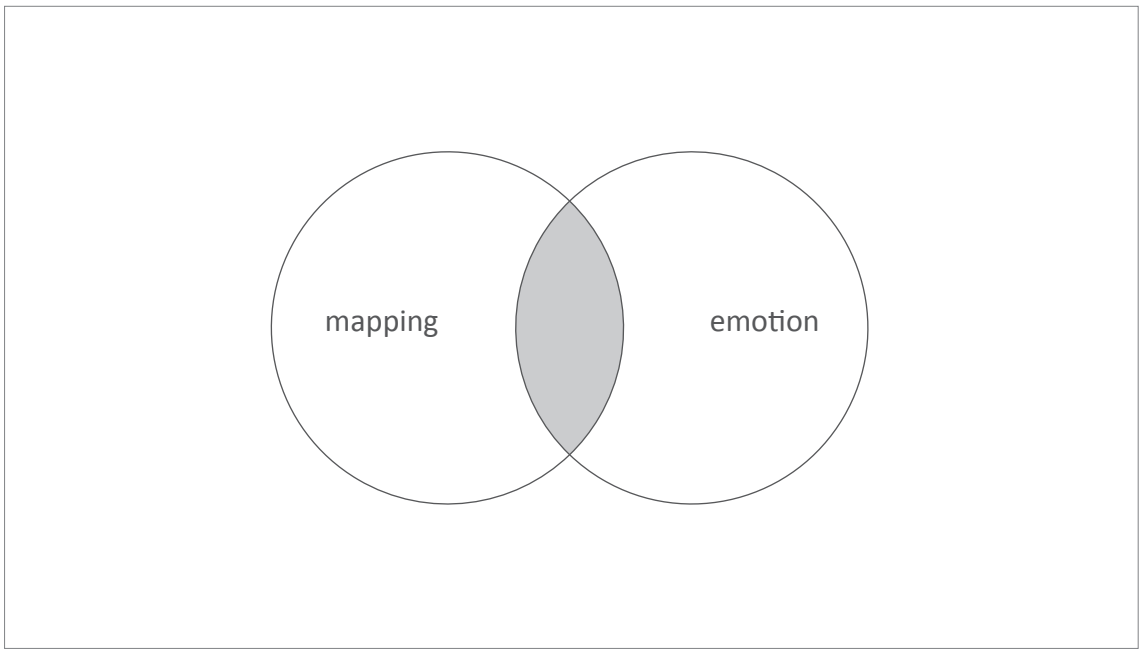


Figure 2-10 Diagram of key concepts for discussion - emotion and mapping

The relationship between emotion and mapping is explored in human geography, in particular, emotional geographies (Bondi, 2005; Davidson et al., 2005; Parr & Fyfe, 2013). Examples of emotional mapping, or spatial affect are given here to frame the immediate academic context of this thesis. These examples share some basic perspectives in that they value the input of experiences that are not traditionally quantified and they attribute significance to them. In some cases, this resulted in a new kind of quantification; in others, a mixed method approach revealed the compatibility and synergy between different knowledges. It is understood that not only should the emotional content of mapped information be explicated but that the emotional context in which the research is carried out should also be given weight (Schuurman, 2006; Young & Gilmore, 2013). Bondi - drawing on her bi-disciplinary expertise in psychotherapies and social geography - argued that there is a place for psychotherapeutic methodologies in geographic research frameworks (Bondi 2005).

This proposition is rooted in interdisciplinary thinking, in the overlap between/ among emotion and space. Through representational and non-representational geographies of emotion, a more responsive understanding of emotion is imagined.

Kwan and Ding's (2008) geo-narrative seeks to:

> *to contribute to advancing qualitative methodologies at the intersection of qualitative GIS, narrative analysis, 3D GIS-based time-geographic methods, and computer-aided qualitative data analysis (p. 448)*

Using a narrative analysis method qualitative data from a case example of Muslim women in New York after 9/11 was analysed and represented in 3D GIS. An example of the 3D map showing various levels of "sense of safety" is presented in Figure 2-11 below.

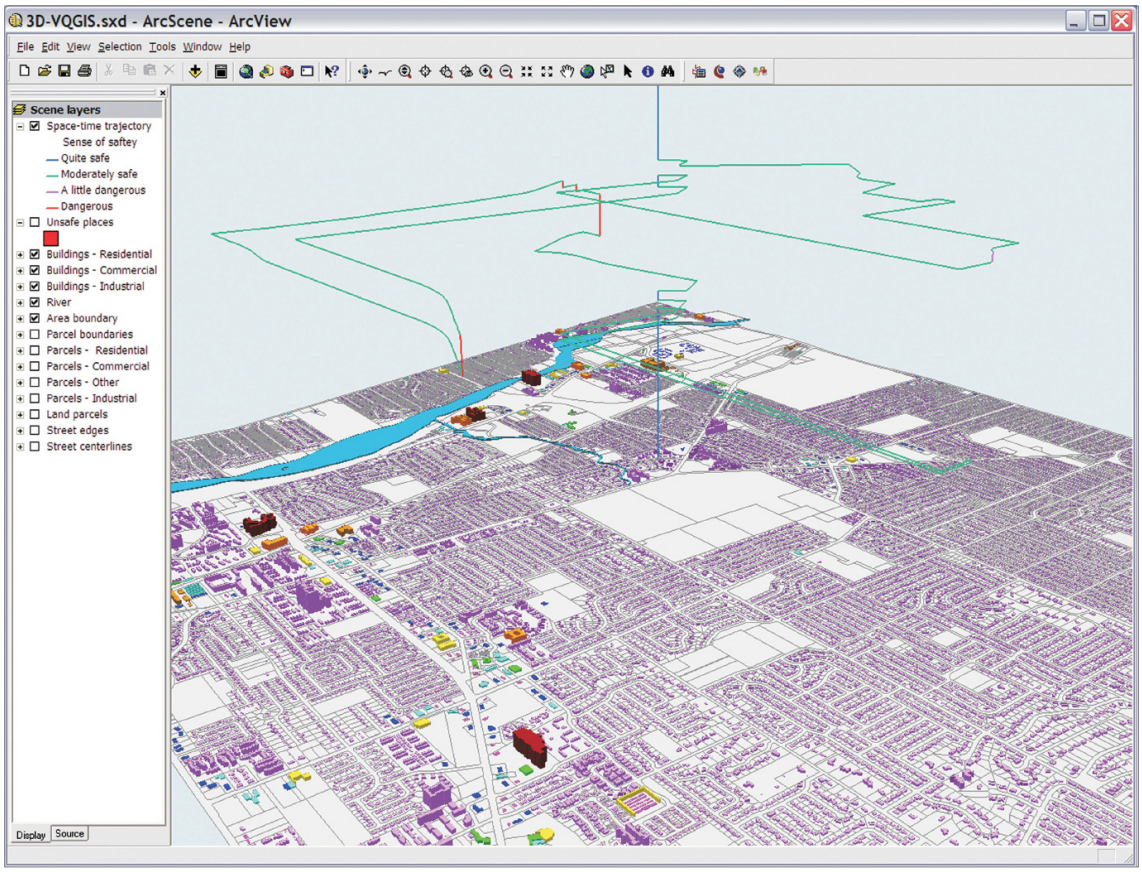


Figure 2-11 "Life path of the selected participant" (Kwan and Ding, 2008, p.455)

Participants' movement around the city were mapped and corresponding emotional responses to space, on a binary scale of fear/safety were then mapped in 3D using colour coding and distance from the ground plane for different emotional registers. While the research has considerable literary academic grounding and offers a robust, validated qualitative analysis, these 3D representations essentially quantify emotion into an degrees of altitude from a baseline.

2.4.2.1 Nold's Emotional Cartography

Emotional Cartography is a contemporary methodology and practice developed by Christian Nold. It offers a technology-based approach to the measuring of emotion, via individuals' biodata, and location (Nold, 2009). He uses a data collection method called bio-mapping via a device which records Galvanic skin response (sweat response) and geo-location. Sweat response is monitored as participants move through urban environments as a signifier for stress-response. The resultant data is then mapped via GIS and a three dimensional model is constructed of the results as 3D stress maps (see Figure 2-12 for an example of the visual output)

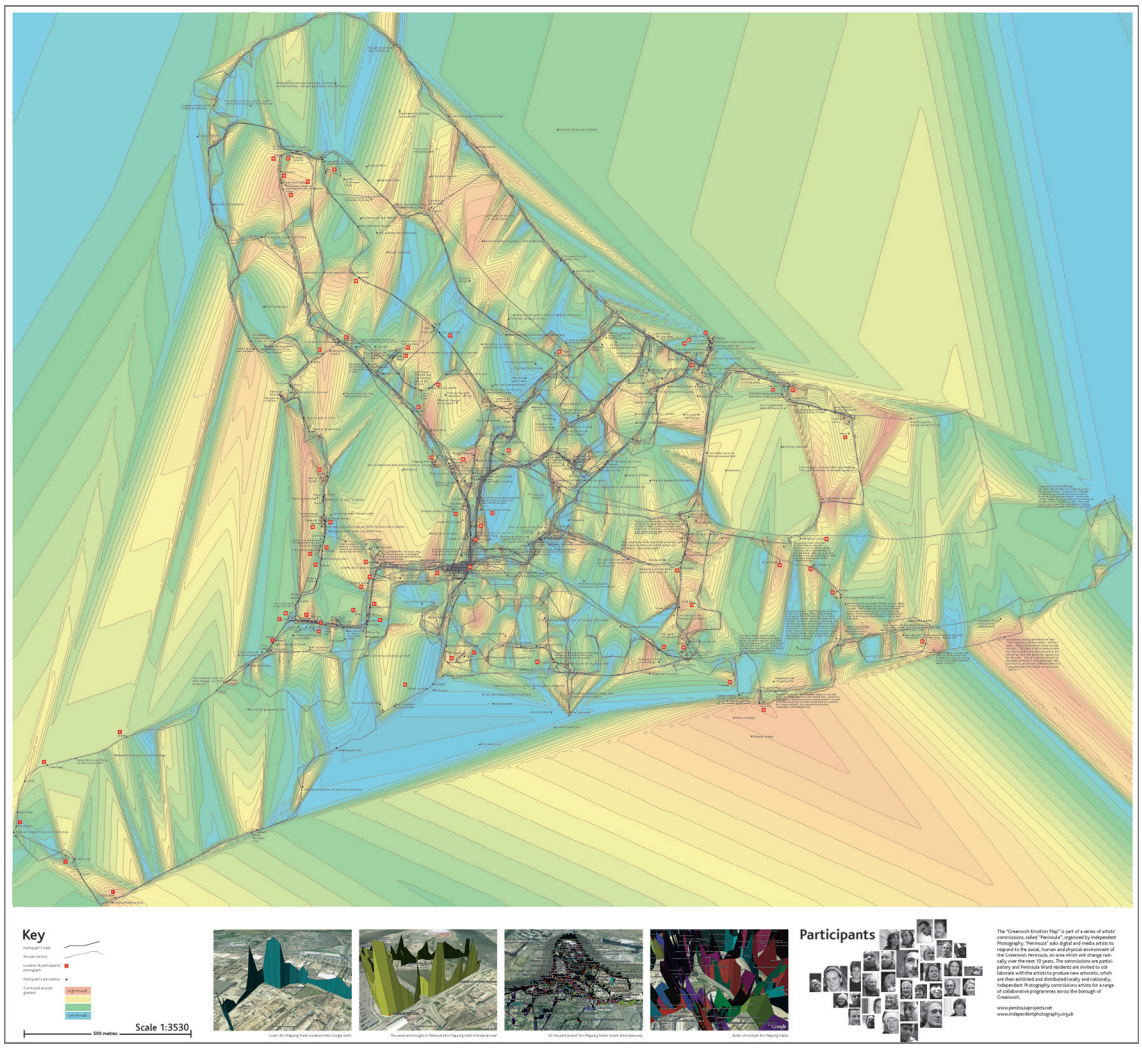


Figure 2-12 Greenwich Emotional Map (Source Nold, 2009, p.63)

Nold's work is concerned with technology and emotion and the resultant data is primarily quantitative. In his emotional maps of various cities, the concept of emotion is restricted to a quantifiable, measurable output – sweat response - which is to some degree triangulated with qualitative data input (e.g. 'there is a steep hill here') but remains in the mapped visualisation a predominantly quantitative result. Nold's Emotional Cartography does not extend discourse into the measuring of emotion beyond the method here stated. As such, it does not contribute to thinking about a constructivist approach to emotion and place. Rather, it notes that emotional

mapping is something that is being considered and thought about from other perspectives, from a positivist and mapping perspective and also from the point of view of technology.

Knigge & Cope (2006) offer an alternative bringing together of qualitative and mapped methods in "Grounded visualization". Key to their research position is that "mixed methods strengthen research not only when the methods are complementary, but also when the findings are contradictory" (p.2021). In the Lower West Side, Buffalo NY, a study was conducted that employed qualitative methods to gather and analyse a variety of data media such as photographs and transcripts. Visualisations combined findings along with cadastral maps showing land use and other information on e.g. statistics on population race. Unfortunately, the paper does not report on a complete body of work as research was ongoing when the article was published, and there are no subsequent published accounts. Pavlovskaya (2002) addressed "the research opportunities that arise from combining feminist and post-structuralist methodologies with GIS technology using an example of recent research on urban transformation in Moscow" (p.286), thereby overlaying lived experiences with statistical data. In this way, she tested and theorised about the "openings (that) exist for new meanings, uses, and effects" (Pavlovskaya, 2006, p.2004) and discovered the gaps between the quantitative and qualitative.

The literature discussed here which looks at the possibilities for extending participatory GIS and visualisation forms the academic context for this thesis. Like Knigge & Cope (2006) this work seeks to integrate a traditionally qualitative method - Grounded Theory - with the spatial in order to form new knowledge about users' experience of space, particularly in its analytical approach. SpatialGT in this

context is therefore understood to be a form of participatory GIS, a way of mapping that follows an iterative process of gathering, analysing and visualising information about users' experiences of contested spaces.

The majority of the contribution to knowledge in this thesis emerged in the developing and testing of the new methodology which is explored in detail in the next chapter, while the theoretical underpinning - which can be called Emotional Mapping - is defined here as principally:

- iterative, qualitative mapping(s) of contextual experiences in contested spaces as a means to enrich the engagement of communities and understandings of perceptional/emotional realities that play a part in the maintenance of division and conflict.

Emotional mapping draws on Kitchin's description of maps as "transitory and fleeting, being contingent, relational and context-dependent; they are always mappings" (Kitchin & Dodge, 2007, p.331).

2.5 Conclusion

The practical challenge of the thesis is to develop SpatialGT as a tool for decision making in contested spaces in Belfast, Northern Ireland. This review establishes a rationale for the research question, "*How can mapping of emotions make a meaningful contribution to policy decision making in contested space?"* by framing emotional mapping in its political, academic, temporal and cultural contexts. The concepts of emotion, contested space, decision making and mapping have been explored here in an interdisciplinary framework to identify overlap and the gaps between. Literature that connects emotion and decision making, emotion and mapping, contested space

and mapping etc. have all been considered and brought to bear on what it means to emotionally map in Belfast .

Additionally, working definitions for key concepts are developed and summarised in this concluding section. These definitions are derived from other definitions but are selective in their scope. The key concepts are defined - for the purposes of this thesis - thus:

- *Emotionality* is person's ability to affect and be affected by their context, be it physical, political, cultural or social. Spatial emotionality can be considered to be a body's capacity to make or inform decisions that shape their environment or activity in that environment.
- *Engagement in decision making* should be conducted not simply to gain approval for already decided interventions, but should be incorporated at multiple stages of planning design and implementation.
- *Mapping* is seen as a social process whereby realities are constructed, inscribed, represented and contested via visual, co-produced means.
- *Contested space* is not only a physical entity or a geographic location of conflict. It is the psychological, linguistic, conceptual or imagined distinction between one thing and another. When we talk of contested space, we refer to all of these distinctions.

Key themes that intersect this review are:

- emotion and mappings doing work in the world
- new methods, technologies and philosophical perspectives that alter what we accept as knowledge.

The literature review identifies a significant gap in research into mapped qualitative data with respect to perceptions. It has unearthed many calls in the fields of human geography, GIS and planning decision making for more inductive methods to be tested. The growing use of mapping by non-experts provides a real opportunity for

far-reaching engagement by the public in any mapping exercises here proposed.

Additional supporting information in the form of literature, policy documentation and statistical data is introduced in subsequent chapters when a deeper understanding of particular concepts is required. As specific psychological concepts (e.g. narrative incoherence) and planning policy contexts (e.g. local development plans) emerge as relevant in the course of analysis, the inclusion of these additional texts helps to contextualise findings of the empirical work.

The next chapter looks in more detail at the mechanisms of qualitative and spatial research methodologies to establish the principles on which to base the new method. In the creation of a new, albeit hybrid methodology, the main contribution to knowledge of the thesis is recognised as a form of methodological innovation. This is a rapidly expanding area of academic development (Wiles et al., 2013) with new methodologies emerging at an increasing rate. The recent growth across disciplines has been attributed to new data technologies and, perhaps more cynically, as a means to add novelty to research thereby appearing to have impact (Taylor & Coffey, 2009). Methodological innovation is variously defined as "the creation of new designs, concepts and ways doing things" (Taylor & Coffey, 2008, p.8). Xenitidou & Gilbert (2009) define innovative research practices as those which "involve technological innovation, cross disciplinary boundaries and / or extend existing methodologies and methods" (p.7). These definitions and criteria are revisited later in this thesis in order to assess its innovativeness. For now however, it is argued that a new methodology is sought here not for novelty's sake but as a unique solution to a new, interdisciplinary question.

Chapter 3 Methodological development of SpatialGT

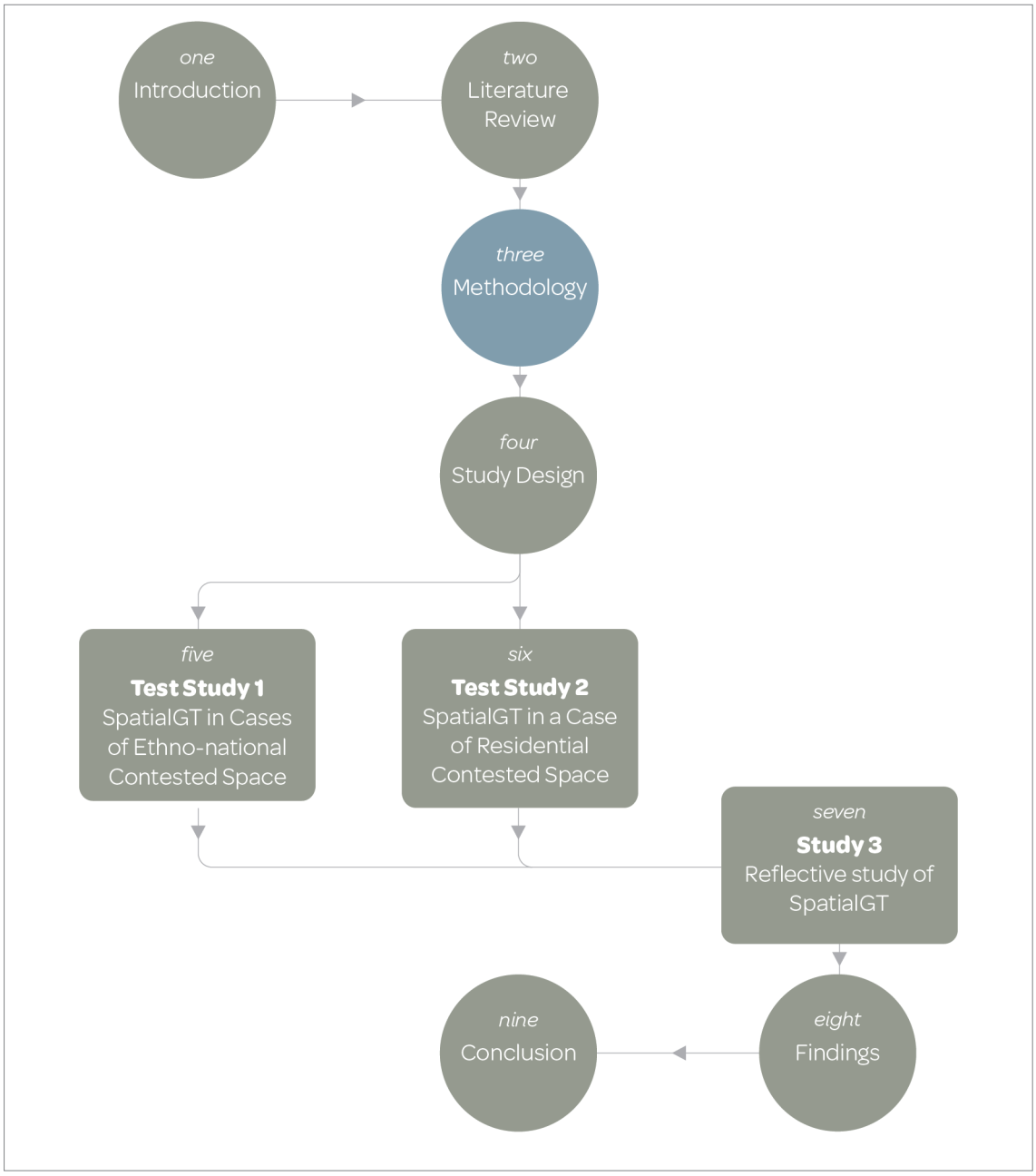


Figure 3-1 Diagram showing all thesis chapters (iii)

3.1 Introduction

Following on from the literature review, this chapter (see Figure 3-1) addresses the methodological context of the thesis, and presents a new methodology with which

to study perceptions in contested space in an effort to inform planning decision making. By augmenting an established method, Grounded Theory Method (GTM) to encompass mapping, a new Spatial Grounded Theory Method (SpatialGT) is imagined. What is proposed here is that integration of mapping with GTM offers the benefits of the spatial representations, analyses and narratives of mapping as well as the more sensitive, inductive properties of qualitative research. Such an approach to research responds to the interdisciplinary challenge of the research question, '*how can mapping of emotions make a meaningful contribution to policy decision making in contested space*?' by using mapping as a means to reposition stakeholders in relation to those spaces of contest in an inductive research process.

3.1.1 Relationship between thesis objectives and methodologies

The literature review conducted thus far is itself a methodology employed in this thesis, requiring what are commonly known as desk-based methods. The scope of this study requires not just the sourcing of academic literature but also policy documents, news items, statistics and other published and online material. The body of information gathered herein by such methods is used not only in the literature review proper but also in constructing a background to studies, verifying emerging data and helping to construct models of understanding in analysis. SpatialGT sits alongside this more traditional methodology as a means to fulfil the research objectives. Table 3-1 below charts the relationship between objectives and the various methodologies, methods and key topics. It can be seen here that both literature review and SpatialGT are used alternately and simultaneously throughout.

Table 3-1 Thesis objectives and corresponding research methods

focus	*thesis objective*	*methodology*	*methods*	*topics to be studied and addressed*
research context	establish an understanding of the research context	literature review	desk-based research	GIS, emotion, planning policy, contested space and engagement
emotion 1	define an epistemological position	literature review	desk-based research	theoretical frameworks, discipline-specific ontologies, definitions, classifications, measurement
	develop a methodological framework for capturing emotion	literature review	desk-based research	research methods, study design, ethical considerations
emotion 2	gather 'emotional' data within contested space	SpatialGT	focus group, interviews, observations	recruitment, group dynamics, sampling
	mapping emotion	SpatialGT	digital graphics	readability, legibility
	analysis and evaluation	literature review	written discourse	coding, sub-themes and themes

focus	*thesis objective*	*methodology*	*methods*	*topics to be studied and addressed*
mapping strategy	formulate a mapping strategy	literature review	desk-based research	GIS and cartographic design
	gather data to be mapped	online and digital searches	access university data sources and publicly available data	crime data/ troubles related incidents data/ NISRA statistics
		SpatialGT	focus group, interviews, observations	Collection and analysis of 'emotional' data
	implement mapping strategy	mapping and testing data mapping	digital graphics	validation via peer review; verification and triangulation of different datasets
assess utility	assess the potential impact/ utility/usefulness of emotional mapping in policy decision making	SpatialGT	interviews	emotion map as tool of engagement and aid in decision making
implications	Highlight the theoretical, procedural and practical implications for emotional mapping with SpatialGT	literature review	desk-based research, analysis of all findings	recommendations, validity, innovation

There are two main sections to this chapter: Methodological Formulation and Procedures in SpatialGT. In the first section, emotion, mapping and research evaluation are considered from an interpretative ontological position and through a social constructivist lens. It addresses the epistemological issues of this thesis: the nature(s) of emotion and how it is captured; the relationship between the research

process and mappings; what constitutes and defines contested space, how different types of knowledge are handled in different research paradigms. The method of research is framed in a wider epistemological discussion with reference to the key disciplines straddled in the thesis. By looking at the nature of the research question itself, an exploration into research formulation and research design is carried out. On this basis, an understanding of appropriate and effective approaches to different types of research was gained, and the chosen methodology was constructed. The new methodology - SpatialGT - is introduced and explicated. Also at this point, GTM is described in some detail; its applications, variations, methods and challenges are presented, due to its strong relationship with the proposed methodology. Where the new method differs is clearly defined and rationalised. The second section presents the procedures that constitute SpatialGT. In a concluding section, the argument for SpatialGT is reiterated and some signposting is given for the extension of the methodological discourse in the thesis.

3.2 Methodological Formulation

> *Planners do not uncover facts like geologists do, but rather, like lawyers, they organise facts as evidence within different arguments (Hoch, 1994, p.105)*

A new methodology is proposed here in the absence of an existing approach that resolves the interdisciplinary challenge of emotional mapping in an interpretative way. Interdisciplinary methodological development is not a straightforward task, and it is recognised that there are inherent difficulties stemming from the fact that "different disciplines both process and structure knowledge in different

and distinctive ways" (Johnston, 2014, p.88). Here, aspects of methodologies are taken from different disciplines and brought together in a new way to form a new methodology, SpatialGT.

3.2.1 Research Approach

Positivist approaches dominate the traditional and contemporary planning landscape. Davoudi (2012) presented a comprehensive analysis of the effects of a dominant positivist approach in historical and contemporary planning models, and showed how a new interpretative direction is being called for in contemporary UK planning. She illustrated how positivism has shaped spatiality, temporality, spatial and scalar structuring, the role of evidence, and representation. The dominant understanding of the role of planning is to order space and time via the use of evidence toward decision making. The author claimed that "the difficulties in quantifying and mapping social and cultural relations have led to their marginalization in plan-making processes" (ibid., p.434) and called for an *evidence-informed* as opposed to *evidence-based* approach in planning as a means to create a more interpretative approach. This interpretative approach would see planning that does not focus on the 'unknown but planned-for' future but co-evolves with society in order to inform and be informed by it. This approach would enable the planning discipline to exist and evolve in a post-modernist context, where it can become one of a number of public processes that "do not operate *in* but *actively construct* space and time" (Harvey, 1996, p.53, emphasis in original).

To construct an effective methodology to the research question, it was necessary to consider the epistemological basis of the question and the field within it rests. The connection between methodological approaches and the ontological paradigm of a

given discipline or field is succinctly described by Firestone (1987) in the following statements:

> *Quantitative methods express the assumptions of a positivist paradigm which holds that behaviour can be explained through objective facts [while] qualitative methods express the assumptions of a phenomenological paradigm that there are multiple realities that are socially defined (ibid., p.16)*

The research question in this thesis asks about emotion in a particular kind of space and its ability to shape decision making, which can itself be an emotional process. As to epistemological positions in relation to emotion and place, this thesis holds the view that people's feelings about their environment are constructed by their cultural environment and in turn, these feelings have a role to play in the shaping of the environment. Epistemological concerns are also embedded in mapping processes, and social constructivism is implicated in contemporary cartographic ideals (Sieber, 2006). Maps are representative, and require interpretation (Wilson, 2015). They have multiple meanings and priorities (Harley, 1989). Additionally, contemporary researchers are urged to begin engaging in more affective and emotional thinking when constructing their mapping methodologies (Young & Gilmore (2013).

The study of emotion in space might not directly lead to clear, unambivalent implications for decision making, and will in all likelihood require interpretation. In contested space, there is no clear relationship between emotion and place, as this is expressed and experienced in different ways depending on culture, ethno-national status and one's stake in the space. What can be drawn on here are theories of emplaced emotion; territoriality, identity and sovereignty, as well as emerging

theories of qualitative mapping. Rather than impose theories or models of emotion or mapping, this research seeks to define a new, inductive approach that builds on new data and the principles of civic engagement. The methodology by which emotion, place, mapping and decision making are brought together is necessarily, therefore, an interpretative one.

In Figure 3-2, Crabtree & Miller (1999) propose a circular diagram of constructivist enquiry as a model for qualitative research. They suggest that "constructivist enquiry is best for story-telling" (p.10). The mapped and discursive findings in this thesis are seen as stories, or narratives, of contested spaces, constructed from the multiple and often conflicting experiences of differing stakeholders. The four stages in this iterative enquiry process can be mapped onto the proposed methodology as explored below.

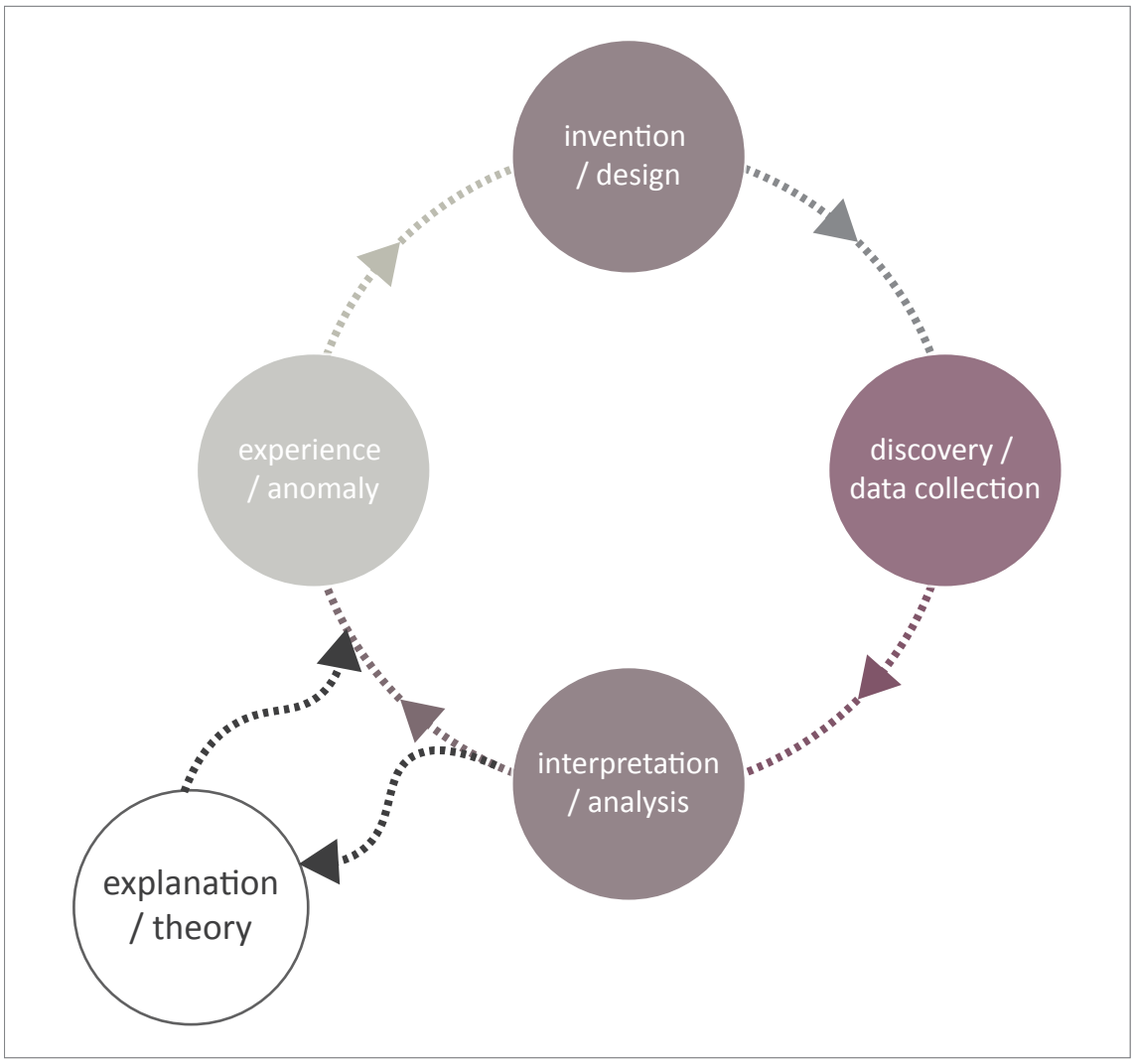


Figure 3-2 Diagram of constructivist enquiry (Crabtree and Miller, 1999)

Some parallels between mapping processes and qualitative methods were seen in the literature on participatory mapping. Hudson-Smith et al. (2009) identified a characteristic of participatory mapping that indicates a parallel between it and inductive research methods:

> *In many contexts, the data simply accumulate and until interaction occurs between users, the only value added is because of the extent to which the data represent some phenomena of interest. The law of large numbers dominates in this instance. (p.525)*

This quotation appears to describe the emergence of a theme in mapping in the same way that themes emerge in qualitative research. This "law of large numbers" is equivalent to the qualitative research concept of "saturation" which is discussed in detail later. In SpatialGT, maps as artefacts and mapping as a process are used to accumulate this data. Within the data gathering events, maps are drawn and redrawn, with information added by participants and/or researcher, in order to build this visual accumulation of significant content. Their graphic quality, scale and extent are repeatedly considered at different stages to enrich their relevance and impact on informing decision making. Such an iterative, co-produced approach to map-making is not uncommon in participatory mapping processes. What is different in SpatialGT to other participatory mapping is the use of the iterative sampling and analysis during data gathering which helps to guide and shape data collection towards those areas of significance as well as those not clearly understood.

To map SpatialGT onto the cycle of the "Diagram of constructivist enquiry" in Figure 3-2 the process moves from the initial identification of *anomaly - or concepts* - via desk-based research (e.g. concept of studentification in high-density student accommodation areas) and initial *experiential* interview (e.g. conversations with university representatives on issues and possible networks to connect with) through to a *design* process (via production of blank maps and statistical mapping and interview design) towards *data collection* in focus groups,interviews and other consultation events and on to *analysis* and *interpretation* of discursive data and graphic material, with further desk-based research to support knowledge of emerging theme. At this point, the emerging understanding is retested or evaluated for significance and validity in further iterations of the research process, with the

opportunity for meaning-making or theory building positioned at this juncture also.

3.2.2 Key epistemological distinctions between positivist and phenomenological approaches

As discussed in the introduction above, planning traditionally employs positivist approaches to research, establishing objective facts by way of correlation and comparison, leading to predictable futures. Quantitative methods are used to study quantifiable data, which necessarily has a degree of objectivity if it is to have scientific validity. Sampling and sample size are dictated by representativeness; an accepted proportion or percentage of a population or subject area dictates the n-number, and randomness in sample choice implies lack of basis. From the data gathered, analysis or thesis is deduced, i.e. the initial hypothesis, or a priori knowledge, is tested against the actual and a conclusion is drawn. This hypothesis - or result - can then transcend the study at hand and be generalised across other similar cases.

The phenomenological position is antithetical to the positivist. It assumes a position of unknowing as a starting point, whereby knowledge is a posteriori in nature, acquired only through direct study. This is the approach employed when a particular case - or phenomenon - is to be looked at, and as such, outputs are not necessarily generalisable. In some cases, transferability is possible. It allows for multiple realities to co-exist within a system. The nature of data is likely to be qualitative to some degree, but might also have elements of quantifiable. Qualitative research methods provide the rigour and framework for handling such information in a systematic way. Analysis is inductive, inferring meaning from the given data. Outputs are referred to as findings instead of results, suggestive that they are discovered rather than calculated. Theory emerging is not formal but substantive (more on this later).

The diagram in Figure 3-3 summarises the key distinctions between these dominant epistemological approaches to research.

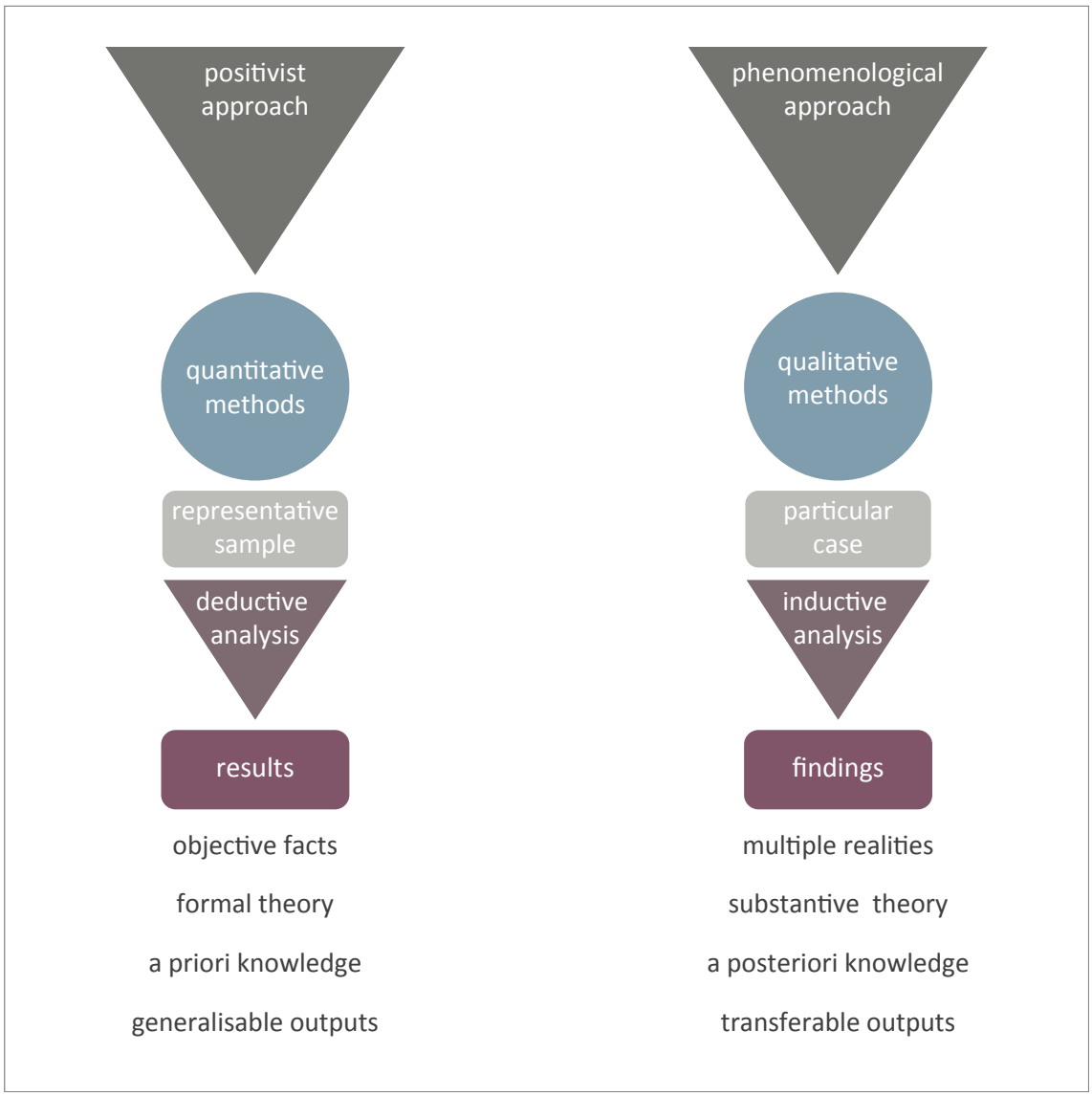


Figure 3-3 Diagram showing key distinctions between positivist and phenomenological research approaches (author's own)

Key characteristics of phenomenological research, which is adopted in this thesis, are summarised below in Table 3-2.

Table 3-2 Characteristics of phenomenological research

research element or stage	*characteristic or description within phenomenological research*
understanding of data	multiple realities
methodology	qualitative methods
nature or sampling	particular case
analytical style	inductive analysis
output nomenclature	findings
significance of outputs	transferable knowledge substantive theory

The research approach in this thesis is towards a substantive theory. Substantive theory is employed when researching specific social phenomenon. In the case of this thesis, phenomena associated with different types of contested spaces in Belfast are studied. Substantive theory is distinct from formal theory. The latter is based upon "validated, generalizable conclusions across multiple studies that represent the research population as a whole, or upon deductive logic that uses validated empirical theories as its basic axioms" (Gasson, 2009). Substantive theory provides a working theory within a particular research area based on actual, empirical evidence (Glor, 2008). For this reason, substantive theories are non-generalisable beyond the substantive research area, but are rather transferable to other areas that share characteristics. In the case of the emotional mapping strategy developed here, a similar restriction on its generalisability and transferability may be assumed, whereby mapping processes developed in contested spaces might only be applicable in other contested spaces with similar characteristics. Transferability of emotional mapping is discussed in more detail later as a key finding of the thesis. The creation of substantive theory is not however the principal objective of this research, as is the case in more traditional applications of qualitative methodologies. Instead,

the principal objectives here are the construction and testing of a field guide to engagement, namely an emotional mapping process. Like substantive theory building though, this tool has elements of transferability and is grounded - or substantiated - in data gathered first-hand. The outputs of this thesis are therefore, not only the emotional maps as "stable, knowable, essential outputs" (Kitchin et al., 2013, p.484) which are part of a field guide to engagement, but also processes by which mapping and emotion interact in a relational, ongoing process, "an ontogenetic position that understood maps as always in the process of becoming" (ibid., tp.480).

3.2.3 From Grounded Theory Method to SpatialGT

SpatialGT is proposed here as an augmentation of GTM, created in order to respond to the geo-spatial nature of the research area. The key difference - and benefit - of SpatialGT over traditional GTM is that the use of mapping at numerous stages of data gathering, analysis and interpretation contextualises the new knowledge as it emerges from the studies. Working through the spatial lens, the researcher is primarily focusing on emplaced elements of the data, both in content and meaning, which helps to build a site-specific substantive theory of the spaces of contest under study.

GTM is described here in its historical and disciplinary context. Key terminology and concepts are explicated. Following this, SpatialGT is described, primarily in terms of how it differs from GTM. The section following this presents the mechanisms of the new methodology in its entirety.

Grounded Theory was first employed in the 1960's by Glaser and Strauss (1967) and developed in their writing and practice. The "underpinning epistemological

position and the goals of grounded theory [] are to develop an explanatory theory of the social processes that are studied in the environments in which they have taken place" (O'Reilly & Parker, 2013, p.192). Traditional - or Glaserian Grounded Theory as it became known as - has been described as "positivistic/postpositivistic in intent" (Lincoln & Guba, 2005, p. 193–196 cited in Mills et al., 2007) in that there is an assumption of a singular truth or reality inherent in data that the researcher reveals or discovers. Since its introduction, it has become "the most widely employed interpretative strategy in the socials sciences" (Denzin & Lincoln, 1994, p.204). Soon after the emergence of the method, Strauss, one of the original creators began rethinking his position particularly in relation to the role of the researcher and the objectivity of emerging theory. Straussian Grounded Theory - later named a Constructivist Grounded Theory - was the first significant augmentation of the original method, and one that "clearly positions the researcher as an author who reconstructs meaning in the research process" (Mills et al., 2007, p.74). This aspect of Constructivist Grounded Theory is particularly relevant in the formulation of a new spatial grounded theory.

As discussed in the previous chapter, the cartographer like the author, is not neutral or objective in their theoretical or philosophical position, and this naturally permeates the texts that are produced. The positivist assumption of a singular truth in text - either written or graphical - limits knowledge construction and meaning-making to address only that which is understood already to be "truth". Without considering the wider, often hidden influences of power and inequalities, texts, images and maps will be misread as merely representative of "the" reality instead of one of many realities. Such texts should be regarded "as the sort of sign that presents

a deceptive appearance of naturalness and transparence concealing an opaque, distorting, arbitrary mechanism of representation." (Mitchell, cited in Harley, 1989, p.8). Bondi's assertion that feminist geography "has emphasized the fluidity and pervasiveness of emotion in the context of situated approaches to knowledge-production, in which researchers are understood as intrinsically connected to their research subjects" (Bondi, 2005, p.445) echoes this position in relation to knowledge production and the relational nature of research.

The Constructivist Grounded Theory model is the basis for the new methodology in this thesis. The list below (Corbin & Strauss, 1990) presents eleven procedures in the development of this method:

1. Data collection and analysis are interrelated processes.
2. Concepts are the basic units of analysis.
3. Categories must be developed and related.
4. Sampling in GTM proceeds on theoretical grounds.
5. Analysis makes use of constant comparisons.
6. Patterns and variations must be accounted for.
7. Process must be built into theory.
8. Writing theoretical memos is an integral part of doing Grounded Theory.
9. Hypotheses about relationships among categories are developed and verified as much as possible during the research process.
10. A grounded theorist need not work alone.
11. Broader structural conditions must be brought into the analysis, however microscopic in focus is the research. (ibid., pp.6-11)

Constructivist Grounded Theory values the researcher's experience and their relationship to the research process; every researcher brings with them a bias of some sort, be that assumptions about the research outcomes or personal prejudices as a

result of for example their own life experiences, their relationship with participants and other team members. A key mechanism to chart this researcher role is the audit trail, which provides a continuous account of interpretation, analysis and personal reflection.

As SpatialGT is positioned in a constructivist paradigm, the tenets for Constructivist Grounded Theory are more relevant than Classic Grounded Theory. However, for the sake of simplicity, references in this thesis to the Grounded Theory basis of SpatialGT will use GTM, or Grounded Theory Method as a signifier. Rather than specify exactly what is borrowed from Straussian and what comes from Glaserian, the term GTM will stand for all aspects rooted in both, as distinct from those elements that mapping bring to the new methodology.

GTM is not commonly used by planning researchers. At the time of writing, there are less than five peer reviewed articles in which GTM is employed in the field of spatial planning. Two of these share authors and were written on very similar subjects, that is, stakeholders' perceptions of processes and changes in rural planning in Flanders (Kerselaers et al., 2013; Rogge et al., 2011). The scarcity of this method in spatial planning research could on the one hand suggest its inapplicability. On the other, there is an argument that the use of such inductive methods marks a shift in research practices. As stated in one of the articles identified, "this research confirms the fact that a qualitative research approach can contribute valuable information to the process of a planned landscape change" (Rogge et al., 2011, p.341).

The augmentation of an existing methodology to create a new one here raises the question of whether or not SpatialGT is a strict Grounded Theory method or a mix of methods. Existing variants - Feminist Grounded Theory (Wuest, 1995) and

Constructivist Grounded Theory (Evans, 2013) - have evolved as a response to a particular research lens or philosophical position held by disciplines or researchers. In the case of this proposed new spatial grounded theory, the research lens is distinguished by its spatiality, hence the neologism “Spatial Grounded Theory Method”. The use of mapping at many stages in the new methodology as well as the focus on spatial data, represent significant modification to the original GTM process. What mapping offers in addition to the traditional Grounded approach is the opportunity to shift perspective via mappings and allow stakeholders to position themselves in their wider spatial context. In spaces of contest, spatial knowledge is constructed along lines of territoriality and safety, leaving pockets of spatial unknowing. Mappings have the capacity to not only challenge those spatial constructs, but to help create new, more integrated ones (Harvey, 2013; Schuurman, 2006). The aerial view and the map provide a clear picture of just how close opposing sides of the community really are to the other. This act of reorientation is facilitated and reinforced by engaging with maps in multiple ways. Through the thesis, the power of different kinds of mapping are tested and evaluated. It is the on-going, grounded and co-produced mapping process of SpatialGT that distinguishes it as a comprehensive methodology.

3.3 Procedures in SpatialGT

This section explicates the various procedures that were employed in SpatialGT, and can be understood to be a field-guide of sorts for future application of the methodology. Some summary information on how the procedures were conducted in the three studies that make up the primary research of this thesis are given. Some

key terms and definitions are also presented here. SpatialGT is an augmentation of GTM and as such, shares many procedures from this widely used method. Key characteristics of SpatialGT are listed below in Table 3-3. In the left column the borrowed elements of Constructivist Grounded Theory and in the corresponding cell in the right hand column, a description of the additional spatial dimension is given.

Table 3-3 Key characteristics of SpatialGT as distinct from Constructivist Grounded Theory

From Constructivist Grounded Theory	*Specific to SpatialGT*
Augmentation of Constructivist Grounded Theory	Concerned with construction of meaning in relation to space
Incorporates quantitative and secondary data in analysis and interpretation	Uses blank maps and 'working mappings' during data collection to capture place-specific data, as prompts, visual cues and recording media
Follows Grounded Theory coding process – open coding, axial coding, selective coding	Emphasises spatial metadata
Follows Grounded Theory development of themes from codes, or concepts	Mappings are developed during analysis based on emerging themes
Uses secondary and quantitative data for analysis, meaning-making, verification and triangulation	Uses secondary and quantitative data to develop supporting mappings
Discursive outputs	Mapped outputs

Figure 3-4 below gives an overview of how all procedures were intended to fit together, forming a single methodological process. Given that the refinement and testing of SpatialGT was ongoing throughout the studies, a degree of 'trail and error' was employed to test where and how mappings and spatiality was relevant or useful or to the research process. The evolving understanding of mechanisms, strengths and weaknesses of the methodology in contested spaces ultimately led

to the refinement of this 'process' diagram, which was redrawn and presented in *Chapter 8* in Figure 8-3 on page 293.

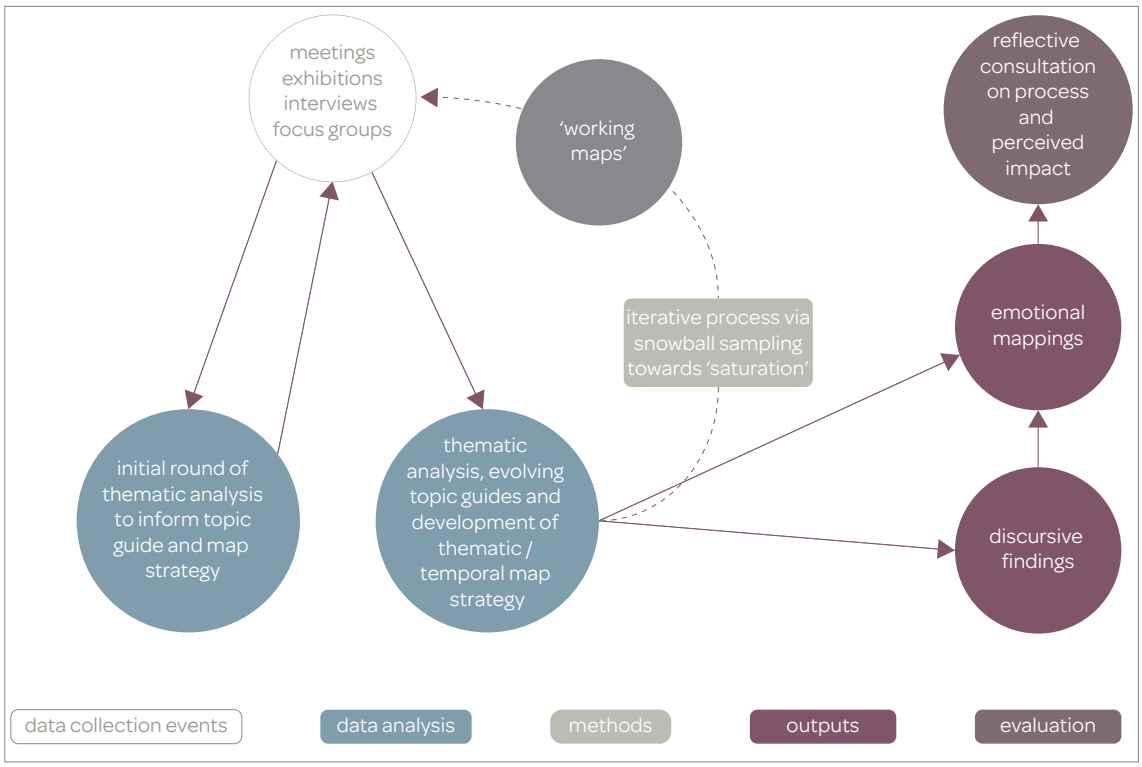


Figure 3-4 Spatial Grounded Theory Method process (author's own)

3.3.3.1 A note on iterative processes and the feedback loop

Like GTM, SpatialGT is an iterative process. Rather than beginning the research process with a hypothesis to be tested, these grounded methods require a more curious, open perspective to begin with. Data is gathered, and then analysed before proceeding to the next data gathering stage. Analysis between the data collection points distinguishes an iterative methodology from - to borrow from software development language - a waterfall methodology (Cabage, 2012) in which one development stage inevitably leads to the next and so on. The iterative process is defined by its repeated cycle of research design, data collection, analysis, redesign, data collection and so on. As such, it contains an inherent feedback loop, in which

the emerging information gathered determines how the study proceeds, the direction of the research, the themes to be explored and the point of 'saturation'. In the case of SpatialGT, this feedback loop provided vital direction and control to a qualitative study that straddled not only many literary disciplines but also intense, conflicting identities and emotions. The feedback loop also provided a crucial platform for continuous testing of emotional mappings as they were conceived and designed in order to test their design quality, communicative strength as well as their potential to stimulate new information.

3.3.1 Theoretical (snowball) sampling

GTM employs a 'snowball approach' to data collection. This means that data gathered at one session will inform the next stage of data collection (Charmaz, 2006), building on it and extending the subsequent analysis in an expanding - as opposed to reductive - way. Relevant data is amassed around central ideas, hence the snowball analogy. As a specific theme emerges, it might become necessary to acquire specialist knowledge on that themes from an expert. Similarly, if a gap in the data emerges, it might prompt the researcher to seek out a person well-placed to fill this knowledge gap, or new literature on the emerging theme. In this way, the data dictates subsequent samples as well as identifying some elements of outstanding information. In SpatialGT, the theoretical sampling model is followed closely, however mapping is employed where applicable in gathering and presenting data. This might be in the form of existing maps from published sources e.g. population demographics, or by producing maps based on data gathered or found in the course of the process, depending on the theme and what additional information is needed to saturate it.

3.3.2 Recruitment

Choice of the most suitable recruitment methods depend to some degree on sample selection as well as the researcher's own relationships and networks in the field. For example, in one of the studies herein, the author cold-emailed potential participants and in another, approached individuals in person at meetings and in yet another, relied on community representatives to recruit. Information on the study was given to help people make an informed decision to participate. *Appendix A.1, A.2* and *A.3* contain samples of the information circulated in each study.

3.3.3 Data collection methods

A number of qualitative data gathering methods were employed in addition to desk-based research methods. They were: interviews, focus groups and observations. The first two of these methods offer the researcher the opportunity to capture data directly from those with lived experience or expertise. Interviews are on a one-on-one, face-to-face basis between the author and participants and focus groups are when more than one person is brought together to 'focus' on a given topic and offer their perspective/expertise. In an observational capacity however, the researcher's presence is secondary to the meeting or other activity that engages participants. Interviews and focus groups are among the most popular and useful qualitative methods, providing a rich source of in-depth data. Observation has a cricial role to play also. In observations, it is possible witness multiple perspectives and the playing out of complex dynamics among different groups.

3.3.3.1 Semi-structured interviews and focus groups

Interviews and focus groups provide an intimate environment for participants to share their experiences and views. As stated above, the main difference between these two methods is that there are multiple participants in a focus group. Given the spatial focus of SpatialGT, mapping is an integral part of the interview and focus group methods. Maps that are blank and those with data already marked-up are used to frame and inform questions and discussion. Maps can help participants orientate themselves in their environments and see spatial interrelationships easily. This is particularly useful in cases where there is spatial segregation, as people might be unfamiliar with spaces relatively close to them. Audio-recording or note-taking are the standard methods of recording interviews and focus groups. Maps offer an additional graphic recording mechanism for recording data also, particularly when it is location-specific, in which case it can be marked directly to that mapped location. Blank maps of the test study areas and wider geographic contexts based on OpenStreetMap (OSM, 2017), Mapbox (2017) and Land & Property Services NI (2017) were formatted by the author and printed on A4 or A3 paper (see *Appendix B* for samples). These were brought to interviews and focus groups and used as tools to facilitate discussion of space-specific aspects. In initial data collection events, blank maps were shown to participants, and questions about their readability were asked. On the basis of this, certain graphics were selected for use as base maps for future graphics. Map scale was not considered in the traditional cartographic sense. Maps were scaled according to their extent and print size. A sample base map is added below in Figure 3-5.

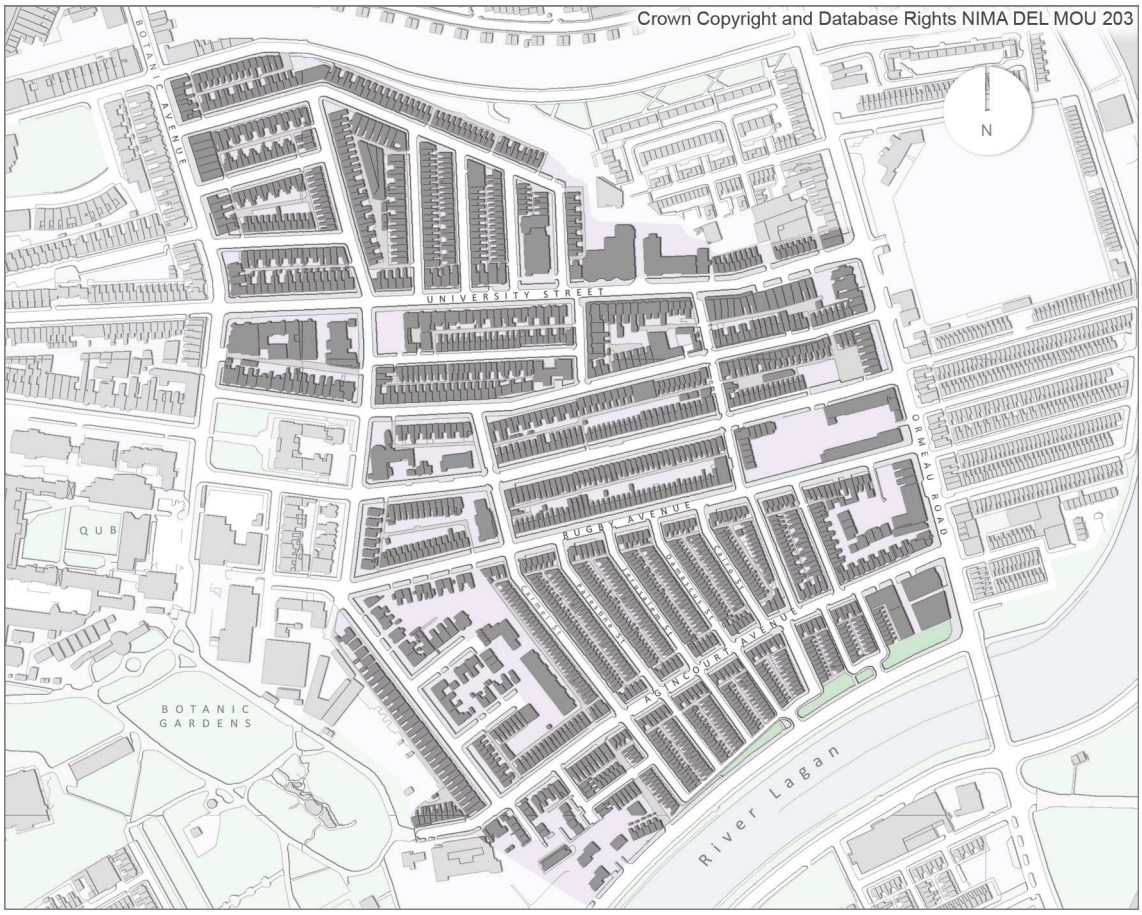


Figure 3-5 Sample map (not to scale) used in interviews

Consideration was given to the grouping of focus groups participants. In the case of the Test Study 1 discussed later in *Chapter 5*, different locations were identified for focus groups made up of participants from one or other side of the ethno-national divide. This is explained in more detail under on page 121.

In addition to these formal sessions, informal interviews and meetings enrich the understanding of the research context and inform the analysis of data as it emerges.

3.3.3.2 Observation

Observation as a data collection method is also employed in SpatialGT. The key advantages to using this method are:

- to create a baseline knowledge of perceptions and emotionality of contest among stakeholders in order to orientate the research
- to verify emerging data
- to identify suitable participants for more in-depth data collection.

Events to be observed might be closed meetings, public meetings, public events or exhibitions. An 'overt straight' observation approach was used (see Table 3-4 below) in both of the test studies. The researcher introduced herself and gave her reason for being there, but otherwise did not engage in discussion.

Table 3-4 Typologies of research observational approaches (Source: (Kitchin and Tate, 2000, p.220) Emphasis added to approach used in this study

	Degree of participation →	
	Straight Observation	*Participant Observation*
Overt	*Researcher does not engage with the group under study but makes no attempt to conceal fact of observation*	Researcher joins a group as a participant in an event but does not hide fact that (s)he is observing them
Covert	Researcher does not engage with the group under study and does not reveal to the group that they are being studied	Researcher joins a group as a participant in a situation without telling them that (s)he is observing them

Field notes were taken at all meetings and were completed with more reflective notes soon after meetings. The key areas to be reported were:

- Meeting name
- Date
- Location
- Organised by
- Chaired by
- Members present

- Main topics
- Materials distributed - in some cases maps
- Areas of conflict
- Emotion expressed.

A sample of notes taken at some meetings are provided in *Appendix C.2*.

3.3.3.3 Memos, reflective diary and notes

Memos, reflective diaries and notes (Snyder, 2012) were used throughout studies to document the experience and observations of the author, which helped to build an interpretation of the data. Memos were in the form of annotations to the data (e.g. reminder to investigate further a particular concept, idea or theme). The reflective diary was used after each data collection event and throughout the analysis process. This written, and sometimes illustrated, document helped to chart ideas and develop themes. It provided a space to assert personal reflections that might inform the research process e.g. thoughts about what was 'not said' in an interview. These data collection methods contribute to the audit trail (see *3.3.8.1 Audit trail* on page 85 for more detail on this).

3.3.3.4 Other data collection methods

The flexibility of GTM to include quantitative and qualitative data sources makes it distinct from other phenomenological approaches. This aspect of GTM is maintained in SpatialGT making way for the incorporation of data from literature, consultations, public meetings, informal conversations, meeting agendas and notes, email correspondence, news reports and government policy documents. Literature searching and data gathering from media and mapped sources continued alongside

primary data collection in order to support, verify and enrich the process.

3.3.4 Topic guides

Emergent, open-ended topic guides (Jennings et al., 2015) were developed from one data collection event to the next. Some keys topics were framed in a small number of questions that constituted the main body of the interview schedule, but participants could steer the discussion towards other significant topics. *Appendix A.4* shows a sample interview schedule that was used in Test Study 2. By using this type of open question, the limitations of the researcher's experience or knowledge, or underlying assumptions do not adversely affect the scope of the session.

A risk in this approach is that discussion may move completely off-topic and become prolonged. It is incumbent on the researcher to have the necessary social skills to direct the discussion back while maintaining an atmosphere of inclusion and flow. As themes emerge from the data, they can be verified in subsequent sessions. Table 3-5 - an extract from an interview schedule - shows the way in which themes were tested mid-way through data gathering in Test Study 2.

Table 3-5 Topic guide with open questions from an interview schedule

Emerging theme	*Question*
Heterogeneity among user groups	Please discuss any tensions among students in the Holyland that you are aware of. What are the short term and long term consequences of this for students and for the area?
Resources	Please describe the existence or lack of resources in the Holyland and nearby for residents, students and incoming migrant communities.
Overcrowding	The Holyland is a densely populated area. How does this overcrowding effect people in your opinion?
HMOs	Are there any issues relating specifically to HMOs that are of concern for you?
Opening of new UU campus	What impact do you think this will have on the Holyland? How will it affect the Cathedral Quarter and surrounding residential area?
Management	In your experience, how is conflict managed in the Holyland? What is your organization's position in relation to management? How could this be improved?

3.3.5 Analysis

The proposed process of SpatialGT analysis draws on traditional GTM analysis, but with an emphasis on spatial relationships. Based on Creswell's identification of the analytical stages of GTM (Creswell, 2012), Table 3-6 below illustrates the key differences between the protocols of GTM and SpatialGT.

Table 3-6 Summary comparison of GT and SpatialGT analysis stages

	Grounded Theory Method	*Spatial Grounded Theory Method*
Analysis stages		**Drafting and testing of base map graphics**
	Open coding - to find categories	Open coding - to find categories
	Axial coding - to find links between the categories	Axial coding - to find links between the categories
	Selective coding - to find the core themes relating to the phenomenon	Selective coding - to find the core themes relating to the phenomenon
		Development of 'working maps'
	Theoretical saturation.	Theoretical saturation.
	Development of a theory	Development of **emotional mappings and refining of mapping protocol**

Open coding refers to the first round of coding, which seeks to apply some meaning to the content of datasets. The second, more focussed round is axial coding which builds on open coding by locating similar codes and making connections across the dataset. As this occurs, themes begin to emerge, that can be further explored via theoretical sampling. The diagram in Figure 3-6 below demonstrates this process of forward and backward open and axial coding.

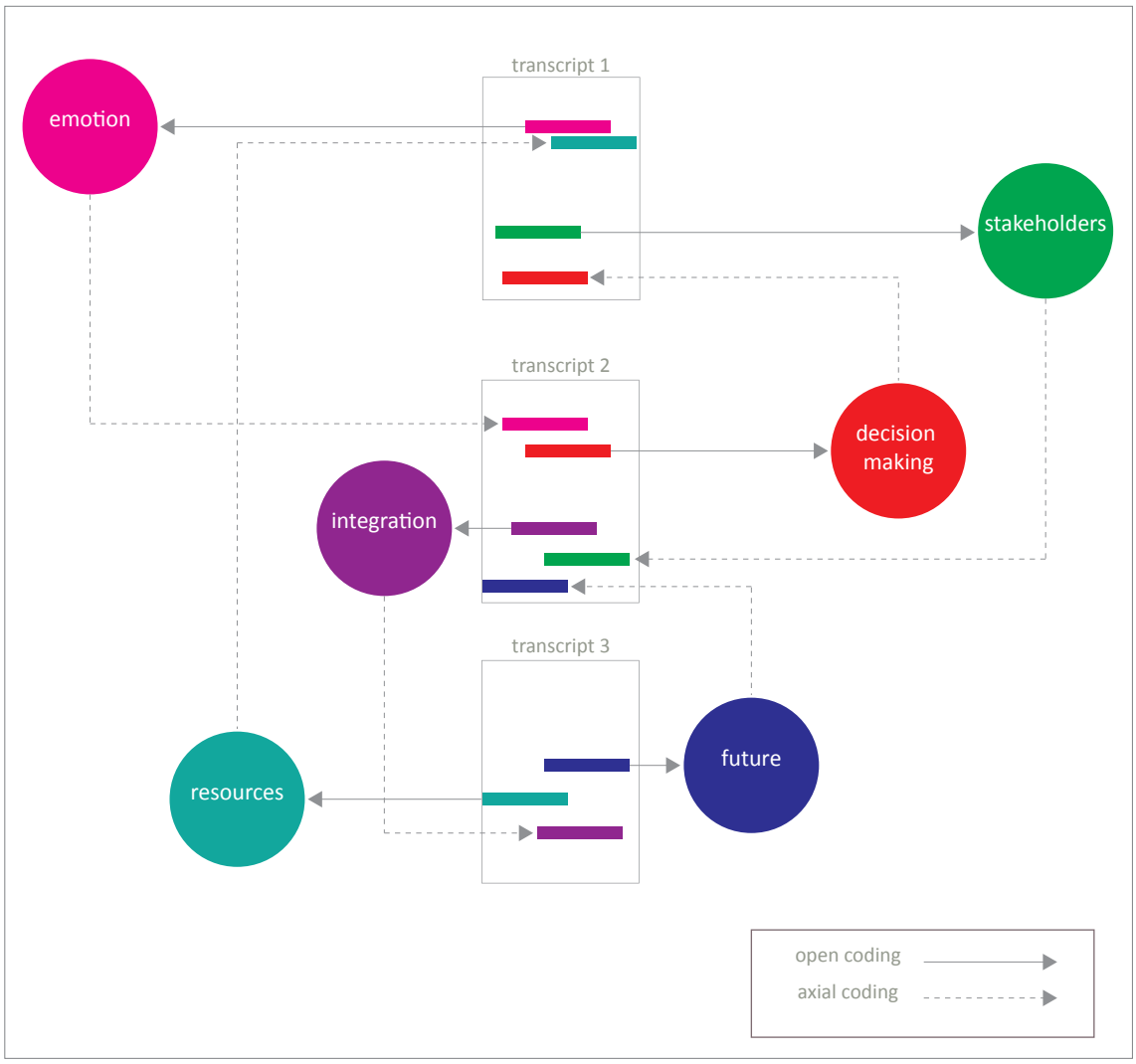


Figure 3-6 Example of open and axial coding across several transcripts (author's own)

Selective coding is the "process by which all categories are unified around a 'core' category, and categories that need further explication are filled in with descriptive detail" (Corbin and Strauss, 1990).

3.3.5.1 Nvivo

Nvivo (2012) was used to manage analysis of all primary data in written form such as transcripts, notes and memos. As highlighted by Gibbs (2002), "the design of Nvivo was strongly influenced by Grounded Theory Method and therefore the

program gives good support for the method" (p.165). A new file was created for each of the three studies. As each unit of data was created, it was imported into this file and then coded. Any new codes were added, and retrospectively validated for relevance across previous data.

Coding in Nvivo is done using nodes, which can be named by the coder or created "in vivo", in which case the content of the code becomes the name of the code. For example, "they feel so frustrated" in a transcript was coded to a node called 'they feel so frustrated'. Both methods were used in this analysis at the author's discretion, as a means to preserve the inherent meaning of the data and to attribute perceived meaning by way of interpretation. In creating new nodes, the author sought to stay as close to the language of the text and not impose alien concepts.

Once nodes were attributed to text, they were then categorised according to their similarity or type. This was done by creating sub-folders with thematic names, into which the nodes were grouped. The node given in the example was positioned into a folder called 'frustration'. This process corresponds to axial coding as proposed by SpatialGT. Further analysis and arrangement of the sub-folders was then carried out by making folders corresponding to the themes, e.g. "frustration" filed under as "emotional consequences of contest" which synthesised the main themes of the data. Table 3-7 below charts the respective terminologies of the SpatialGT and Nvivo software for convenience.

Table 3-7 Overlay of Nvivo terminology onto SpatialGT terminology

SpatialGT analysis stage	*SpatialGT term*	*Nvivo coding*	*Example*
Open coding - finding categories	code	nodes	"they feel so frustrated"
Axial coding	sub-theme	sub-folders	frustration
Selective coding	themes	thematic folders	perceived emotional consequences of contest

The themes identified by this process became the subject of visual mappings. These maps were then presented at subsequent data gathering events as aids to discussion and also for verification purposes. All maps were presented on A3 or A4 in colour. Maps were marked up in interviews and focus groups, with comments and notes made directly onto the physical maps by participants or the author. The blank maps and the "working mappings" in this way acted as tools of engagement and data collection as well as a catalyst for more insights. Colour, opacity and shape were used to distinguish visual elements and emerging themes. In addition to the mappings based on primary data, further mappings of information relating to the wider conditions in the study areas were incorporated. The material mapped in these cases was gathered from publicly available sources such as the Police Service of Northern Ireland (PSNI) website and Northern Ireland Research and Statistics Agency (NISRA) websites as well as direct observation of land use.

3.3.6 Saturation

In the context of GTM, saturation is understood to be the point at which themes have been fully developed, interrelated and validated (Green & Thorogood, 2004; O'Reilly & Parker, 2013). Data saturation is a critical point in data collection when:

> *(1) when no new or relevant data emerge for a category, (2) the category development is dense, and (3) the relationships between categories are well established and validated. (Bowen, 2009, p.309)*

Saturation is dependent on many interconnecting aspects of data collection. Literature review and other published data sources support the development of themes and their validity, and the researcher cannot rely solely on primary data for saturation. It is not possible to ascertain in advance the extent of data gathering, the number and/or choice of participants or when themes will be saturated. The nature of phenomenological research dictates that each case is unique, and as such, new knowledges are unknown at the outset. This lack of certainty early in a research project has been identified as problematic in that ethical and funding considerations require the researcher to propose a sample size (O'Reilly & Parker, 2013). In the case of the studies herein, an estimation was made as to the maximum number of participants and/or data collection events as the basis for ethical approval, which, in reality, was not exceeded.

The recognition of the point of saturation requires the researcher to interpret when categories are complete and valid, and when they believe that no new significant concepts are emerging. This was verified by peer review (see *3.3.8.3 Peer review* on page 86.).

3.3.7 Research saturation

Research saturation is a term that has been devised in this thesis to refer to the extent to which the methodology has been sufficiently tested. The concept of saturation has been borrowed from the lexicon of GTM, where - as discussed above - it refers to the stage in data collection where no new significant data emerges. Research

saturation therefore refers to the stage at which SpatialGT has been applied and tested thoroughly. It should be noted that this thesis seeks not only saturation of data and theory in the studies but also, and perhaps more importantly, the saturation of the methodological development of SpatialGT. As explored in the next chapter, SpatialGT was tested across a number of sites with ranging characteristics, and was rigorously evaluated for its research quality in order to achieve "research saturation".

3.3.7.1 Theoretical sensitivity

Theoretical sensitivity is a concept at the heart of some qualitative methodologies. It refers to the relationship between the data, its potential meaning and the researcher's role in recognising this. To be sensitive to the meaning of data is to have a critical understanding of how it relates to other data, how it should be prioritised in analysis, or whether it should be discarded altogether. In emergent methodological processes, theoretical sensitivity guides the direction of data collection and data analysis. In this thesis, the theoretical sensitivity of the researcher is understood in terms of Vickers and Offredy's (2010). matrix: *relationships, lived experience, professional experience, and academic knowledge*. The author has lived in Belfast for most of her life; for many years, in a family-owned property in the Holyland, building social and professional relationships there. She now lives in East Belfast, one mile from the nearest peace wall at Bryson Street. She has worked and studied in the discipline of the built environment in Northern Ireland for twenty years. She had no prior experience working, living or researching in ethno-national interface locations.

3.3.8 Research quality

There are many benchmarks for quality in qualitative research. Validity and rigour are two of the most universal. Certain other aspects of quality are prioritised for other study types such as pilot or case studies such as the suitability of the aims and objectives (Lancaster et al., 2004) and case selection (Hyett et al., 2014). According to Dallam (2010), "validity and rigor refer to whether the conclusions being drawn from the data are credible, warranted, and able to withstand alternative explanations" (p.74). Four types of validity, are identified by Dallam and are summarised in Table 3-8 below:

Table 3-8 Four types of research validity (based on Dallam, 2010)

validity type	*main characteristic*
descriptive	factual accuracy of the data
interpretative	full and fair representation of the points of view of participants
theoretical	credibility of the integration methods and interpretation
pragmatic	utility and transferability, fittingness, applicability, timeliness, and translatability

Tools used to ensure the first three of these validity types are achieved include audit trial and member checking, discussed in detail elsewhere in this chapter. Additionally, quantitative data from sources such as NISRA, as well as academic literature, were used to triangulate perceptions and interpretations against existing facts and academic precedent.

It is worth reiterating here the primary aim of the thesis, that is, to explore the potential application of Emotional Mapping as a tool for policy decision-making in contested spaces. The "pragmatic validity" of the Emotional mapping as a theoretical position, or the resulting SpatialGT methodology as the procedural tool, i.e. the

"utility and transferability, fittingness, applicability, timeliness, and translatability" is framed therefore within the strict confines of Northern Ireland contested spaces. Transferability to other times, contexts and uses is not the primary concern of this phenomenological research, as the work is seen to be substantive rather than formal theory-building (see page 62 for more on this).

3.3.8.1 Audit trail

Audit trails are a "principal technique for establishing the dependability and confirmability of qualitative research findings" (Bowen, 2009, p.307). They trace the research journey from raw data, memos and other primary data sources to the construction of theory, findings and other outputs. In the studies presented here, audit trial is provided by a number of mechanisms:

- Literature review
- Research report
- Diagrams showing interconnection of themes sub-themes and codes
- Tables of data excerpts alongside coding nodes
- Descriptive text explaining how theories were developed
- Reflective discourse on the quality of findings and obstacles to research
- Mappings of empirical qualitative data and supporting datasets
- Trustworthiness techniques including member checking and peer review
- Data triangulation
- Storage of a complete data set including audio recordings, transcriptions, notes, memos, field notes, computer-based analytical models.
- Interview protocols
- Research reporting, in the respective study chapters

3.3.8.2 Member checking

Member checking is 'the most crucial technique for establishing credibility' (Lincoln & Guba, 1985, p. 314). It is a commonly used procedure for increasing trustworthiness of data (Carlson, 2010: Creswell & Miller, 2000). In the studies, participants were invited to revisit aspects of the data, either during the interview, focus group, meeting or afterwards, and asked to check if what was recorded is what they want to contribute. For example, the researcher might ask, "can I confirm that you believe 'x' to be the case?" Member checking was conducted during all data collection method events, and across events where an additional opinion was needed.

3.3.8.3 Peer review

Peer review is the process by which another researcher - in this case the PhD supervisor - run a parallel process of interpretation of some elements of the data. In each study, a supervisor separately read and analysed one of the transcriptions. The author then presented their analysis and the supervisor confirmed that it was consistent with their understanding. Additionally, the author and first supervisor met often soon after data gathering events to discuss key themes and ideas, concerns and reflections. These discussions and subsequent annotations helped guide issues of saturation, sampling as well as the study analysis.

3.3.9 Ethical considerations

The University Research Governance Filter Committee deemed the proposals for the studies herein as "complete, of an appropriate standard and in category A" (see *Appendix D* for full Report Form) which means that they involve human volunteers

but do not have significant risk to anyone involved.

3.4 Conclusion

In summary, this chapter proposes SpatialGT, as a qualitative research methodology, which draws heavily on GTM for its procedural mechanisms but differs significantly in its emphasis on the spatial. Grounded Theory began as a quantitative method and soon evolved to focus on the relational, qualitative knowledges that emerge in a research setting (Mills et al., 2007). GIS is rooted in qualitative traditions and yet has been developed technologically to process predominantly quantitative data (Pavlovskaya, 2006). The bringing together of these two research methods has been conducted in several ways previously using mixed methods approaches (Knigge & Cope, 2006; Kwan & Ding, 2008), but here, they are merged in a closer, tailored way.

The spatial and emotional are the drivers of SpatialGT and this shapes several aspects of the methodological procedures, particularly the use of mapping at different stages of the methodological process. A field guide has been presented here, with summary descriptions of how it was applied in the studies. However, the key outcome of this thesis is the proposition of a new, previously untested methodology. The evolution and adaptation of the SpatialGT, its methods and processes, across all testing sites is therefore explored and documented explicitly in future chapters as an extension of this methodological development. in particular, the evaluative and concluding chapters offer insights into the procedures and methods proposed here.

The following chapter acts as a bridge from this methodology chapter to the studies, offering a historical background to the research setting as well as looking in more

detail at how the methodology was applied, refined and ultimately validated through the research process toward research saturation.

Chapter 4 Study Design

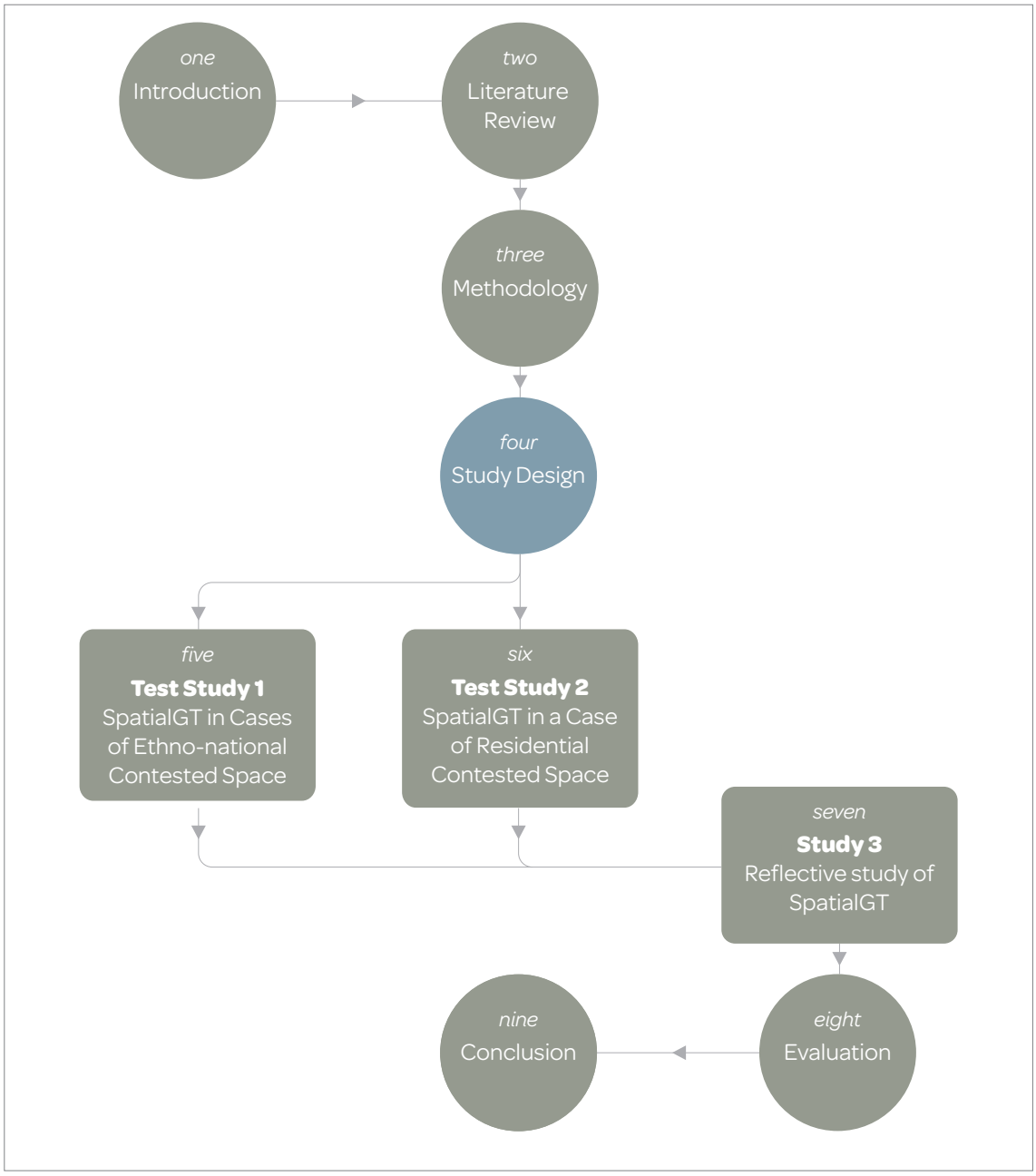


Figure 4-1 Diagram showing all thesis chapters (iv)

4.1 Introduction

This fourth chapter (see Figure 4-1) further develops the methodological proposition of the thesis that has been explicated in the previous chapter which was concerned

with the methodological rationale, mechanisms and protocols for SpatialGT, as well as the epistemological and procedural development of the new method as the central contribution to knowledge of this thesis. This chapter compiles and summarises information about the testing, refinement and evaluation of SpatialGT over three studies It includes study selection, typology, mapping processes and historical, cultural, political and geographic backgrounds to studies. This background information is broad in range, extending from the history of political conflict across Northern Ireland to the issue of studentification that effects localised areas in south Belfast and the NI planning process.

This chapter continues from the preceding one but it also crucially sets the scene for the study chapters that follow. While it extends the methodological proposition, it does so in a site- and study- specific way in that it gives the particulars of how and where SpatialGT is to be employed. As stated in the introductory chapter, this "Study Design" chapter acts as a bridge from the conceptual to the empirical parts of the thesis and is designed to orientate the reader to the key methodological and contextual concerns with using SpatialGT in sites of contest in Northern Ireland.

SpatialGT was developed and tested over three studies. Each study was conducted in Belfast and each in its turn addressed different dimensions of SpatialGT as a method for emotional mapping. Studies fall into two types; the test study and the reflective study.

Revisiting the thesis structure diagram in Figure 4-2, and as stated previously, thesis objectives do not neatly map onto chapters or studies here but are fulfilled in a more evolving, layered way. For example, "an understanding of emotion" was not established in one study and carried over to the next. Instead, the combined

knowledge from all studies was brought together with contemporary academic understandings to reflectively construct a model of understanding, which was then formalised in the thesis findings. The helicoidal path - as distinct from a more straightforward, linear thesis path - reflects the qualitative, iterative nature of the research process and provides the mechanism by which the new methodology can be refined and adapted.

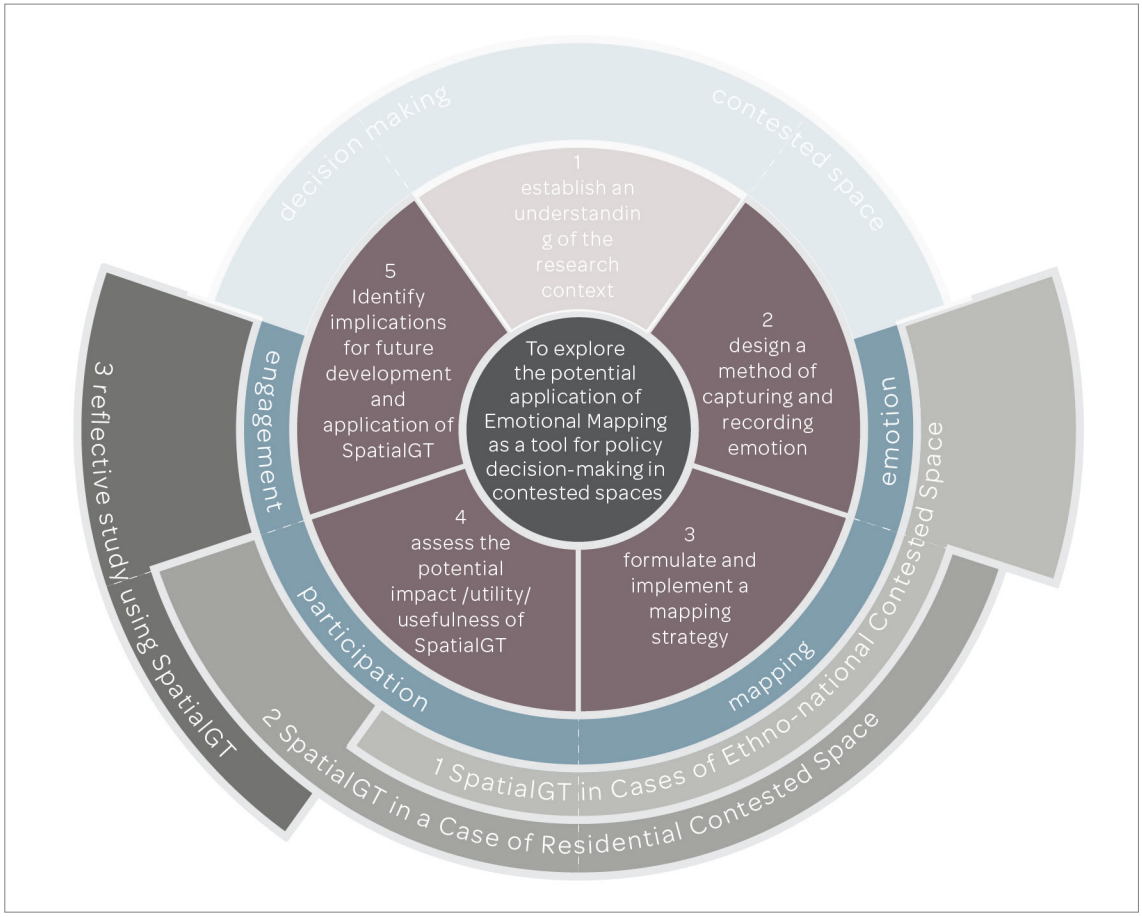


Figure 4-2 Thesis structure diagram showing studies mapped onto objectives (author's own)

The three studies conducted were:

1. SpatialGT in Cases of Ethno-national Contested Space
2. SpatialGT in a Case of Residential Contested Space
3. Reflective study using SpatialGT

Literature review, alongside other quantitative and published data gathering, complemented these studies.

A variety of base maps were sourced from LPS Ordnance survey, OpenStreetMap, GoogleMaps and an online web app called Mapbox (Mapbox, 2017). Illustrator (Adobe®, 2017b), Photoshop (Adobe®, 2017c) and AutoCAD® Architecture (Autodesk, 2017) were used to modify and input data to digital and raster maps.

4.1.1 Co-produced mapping

Mapping was conducted in collaboration with participants in the first two studies. Paper copies of maps were prepared by the researcher in advance of focus groups and interviews. A variety of scales and types of maps with different representational styles were used. Plain base maps were produced. In some cases, shading and labelling was added to differentiate between built form and open space, and to identify main roads/streets or key landmarks. In other cases, specific information was added to the maps which were the author's own graphical representations of particular statistics or information which was considered relevant to the interview process. Aerial photography was also printed out at a number of scales and resolutions.

The author decided to avoid the use of digital or online mapping in the data gathering process and instead use only paper maps for a variety of reasons. Firstly, there was no guarantee of successful internet coverage across all interview locations as they were to some degree at the discretion of the participants. Without consistent internet provision, the author could not provide a similar mapping experience in each data collection session. This might have led to differences in outputs or outcomes across

sites which were not related to the research process itself but were merely products of inconsistent internet provision. Secondly, there was a concern about variation in participant competency in interacting with technologies such as smart phone, iPad or laptop. Again, such variation might have skewed the data gathered.

4.1.2 Test study selection

Test study sites were selected which had a range of types of contest, rather than focusing on one type of contest. This was done to explore how the proposed methodology could be implemented under a range of conditions, which could lead to a richer understanding of the strengths, suitability and challenges in each. The map in Figure 4-3 shows the geographic locations of test study sites in relation to Belfast and to each other. Study 1 was conducted in two interface barrier locations in North Belfast (1a and 1b on the map). Study 2 was conducted in the Holyland in South Belfast (site 2 on the map), where studentification (Smith et al., 2014) and the inward migration of Roma populations has impacted on a long-term inner city residential community.

Figure 4-3 Map of Belfast (nts) showing relative locations of all study sites.

The sites have other distinguishing characteristics such as physical geographic scale,

stakeholder range, case uniqueness and political significance. These differences were not central to the selection criteria, however, they are acknowledged and analysed in the course of studies where pertinent. The key distinction between sites was the nature of the perceived contest. Table 4-1 below lays out the primary typological definitions of these spaces of contest as well as some other key variants that will be looked at in more detail in respective chapters.

Table 4-1 Typologies of contest in the test studies

Test study	*Nature of contest*	*Concepts in study selection*	*Characteristics of contested populations/users*	*Manifestations of contest*
Interface sites	*Sovereign:* Ethno-national	Spatial division Peace walls	Protestant / unionist / loyalist Catholic / nationalist / republican	Sectarian violence, anti-social behaviour
Holyland	*Pluralist:* 'Lifestyle clash', length of tenancy, ethnic, stewardship	Spatial division, overlapping land use	Long-term NI residents Transient university student population Increased migrant population of Romani origins Landlords	Environmental disruption (noise, waste), inter-ethnic hostility, anti-social behaviour, council management costs

Study of contested space in the Northern Ireland context focusses mostly on spaces of sovereign contest (Ellis et al., 2013; Morrissey & Gaffikin, 2006; Murtagh, 2011). In the following studies, ethno-national contest is juxtaposed against the other, pluralist contest for the principle purpose of testing the methodology as opposed to resolving particular questions of contest.

The nature of spatial contest not only dictated the phenomena under study here

but also had a bearing of other features of research, such as engagement, access to participants, data collection etc. Each test study presented unique limitations and opportunities to the proposed research method, requiring different procedural execution. A comparison of the key differences in procedures, along with a summary of participant numbers are presented here in Table 4-2.

Table 4-2 Summary of key procedures for each study

	Test study 1	*Test study 2*	*Reflective study*
Recruitment	via community experts	direct invitation	email invitation
Data collection methods	interviews focus groups observation	interviews observation	interviews
Number of participants (interviews and focus groups)	9	12	8
Number of participants (observation)	32	40	0
Validity check	member checking triangulation audit trail	member checking triangulation	member checking audit trail

Figure 4-4 below maps the relationship between the studies, identifying two study types; the test study and the reflective study. As illustrated, the reflective piece was carried out after the test studies, and builds on the findings from both of them.

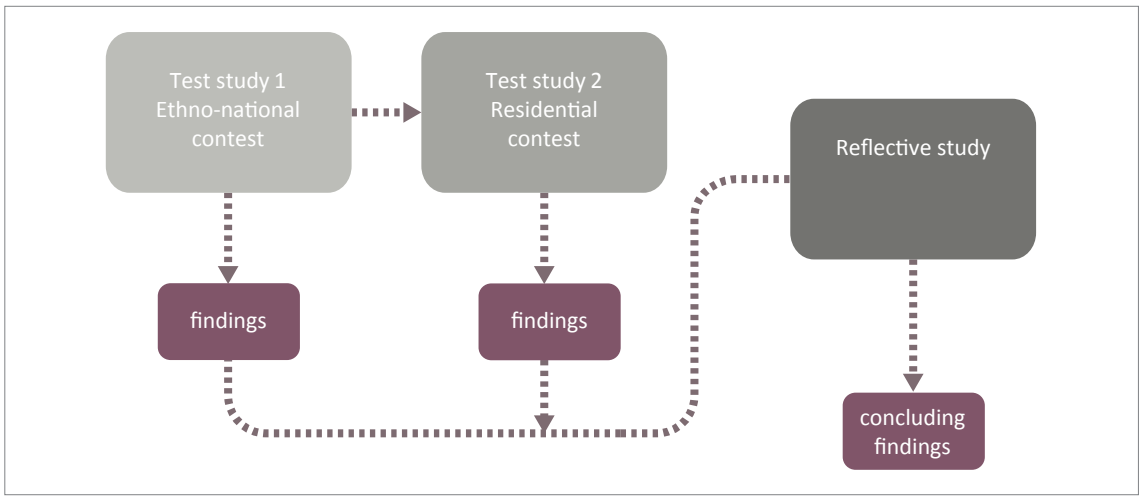


Figure 4-4 Diagram showing relationship between the studies

The following section presents a background to the individual studies and how SpatialGT was conducted therein.

4.2 Test Study 1 - Ethno-national contest

The temporal-spatial context of this research is significant for two main reasons.

Firstly, Northern Ireland is experiencing a change to its public administration which will impact the way decision making occurs. A Review of Public Administration in Northern Ireland (RPA, 2005) was carried out that sought to modernize statutory powers and progress to a more efficient and inclusive future. In 2015, as part of the reform associated with this review, planning powers were devolved from central government to the new eleven local councils. Alongside the transfer of planning powers came the uptake of community planning. This new arrangement has been envisioned as streamlined and fit for purpose which would encourage and support councils to integrate economic, political, social and environmental factors into decision making with the aim of providing a more joined-up approach to all

public services (Lloyd & Rafferty, 2013). In order to do so, councils must employ new ways of engaging with communities and developing new approaches to the design and evaluation of their policies. This new approach to administering the resources and the vision of Northern Ireland Executive provides an incentive for planning practitioners, researchers and educators to look beyond current thinking about contested space and reassess the relationship between strategic priorities and lived experience. As discussed earlier in *Chapter 2*, planning traditionally strives towards an evidence-based position, and in Northern Ireland, planning policy has historically taken a 'colour-blind' position in relation to issues of ethno-national identity (Gaffikin et al., 2008) as a means to remain politically neutral and insure equality in provision. The new community planning approach, combined with shifts in inter-departmental government commitments towards seeking holistic solutions to the problems of sectarianism, duplication of services, inequality etc. provides not only opportunity but also a requirement for new tools: new methods of engagement, new ways of creating and validating knowledge, new ways of seeing, new ways of listening. In this emerging context, SpatialGT provides a new way of looking at these problems by bringing together the visual and discursive, the spatial and the psychological, the affective and the statistical, the lived experience and the expert as a means to inform better decisions.

Secondly, the Northern Ireland Executive has committed to actively "seek local agreement to reduce the number of peace walls" (Northern Ireland Executive, 2012, p.10). While government has a clear agenda to remove the barriers and stimulate economic development in interface areas, divided neighbourhoods may not be ready for such transformation.

4.2.1 Historic context of ethno-national contest

Paramilitary ceasefires and the Good Friday Agreement in the late 1990's marked the end of the "Troubles", a period of intense sectarian violence and terror that began in the late 1960's in Northern Ireland. Whilst the main political dispute that fuelled the Troubles is now played out in the party politics in the Northern Ireland Assembly (The Assembly), Northern Ireland remains a divided place, described as a relatively benign apartheid (Ellis et al., 2013). The two main communities of identity in Northern Ireland, as discussed previously, are currently labelled as CNR and PUL. In spatial terms, most residential areas in Northern Ireland are dominant in one or other identity. The map in Figure 4-5 below shows the percentage of Catholics residing in Belfast wards, based on 2011 census data (NISRA, 2011), illustrating the east-west divide across the city along lines of religion.

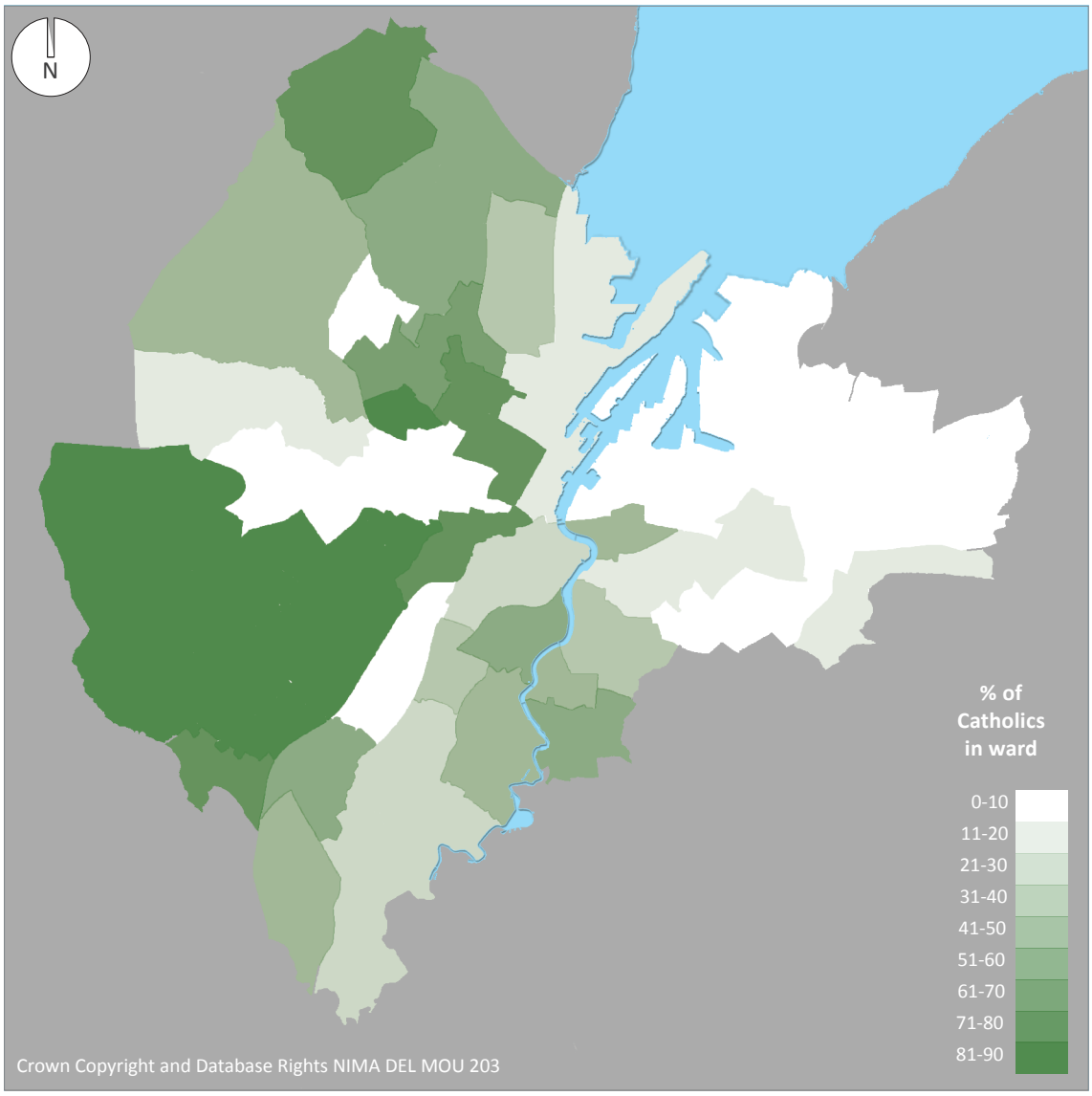


Figure 4-5 Map of Belfast wards (nts) with percentage of Catholics shaded (author's own based on data sourced from NISRA (2011)

Some of the worst violence - including more than 70 murders - of the Troubles occurred in Belfast city centre (Switzer & McDowell, 2009). As a consequence, the city centre has for generations remained a non-residential, commercial zone which was sealed after 6pm with gates. The photograph in Figure 4-6 below shows a typical scene from Belfast city centre during that time. All routes to the central shopping area were secured by the British Army check points until the late 1990's.

As can be seen here, members of the public had their bags and their persons searched by police and army entering the commercial centre.

Figure 4-6 Historic photograph of security checkpoint in Donegall Place, Belfast (source Hayes, 2016).

Segregation in Belfast has provided a basis for community solidarities whilst also generating an environment for the maintenance of community conflict and group stereotyping. In this context only a resolution of the ethno-national conflict itself is likely to lead to a reduction in residential segregation. While census data shows greater integration in housing areas (Nolan, 2014), it is not at a sufficient scale to assert whether segregation still exists at the smaller street scale. More qualitative study is required to create a clearer view of the level of interaction between PUL and CNR in shared housing areas. In cultural terms, these polarised communities have distinct cultural expressions in terms of flags and murals, bestowing different meaning to significant historical events and affiliations. The issues of flags and parades were two of the three key areas that are Northern Ireland's greatest obstacles

to community cohesion (Chair and Vice Chair of the Panel of Parties in the NI Executive, 2013). The third of these obstacles is 'Contending with the Past'; the legacy of 3,300 Troubles-related deaths that have no associated prosecutions.

Residential occupation of the core city dramatically decreased from 1951 onwards, and has not recovered today, as can be seen in Figure 4-7 below.

Figure 4-7 Graphic depiction of changes in residential population of Belfast core. Extract from graphic from (City Assembled, 2010.)

This hollowing-out of Belfast as a place to live was contemporaneous with other major planning projects in the UK that sought to provide housing outside congested and run-down city centres. Craigavon, a large housing area built in the mid-1960's some thirty miles from Belfast was one such project, which drew some of the inner city population away from Belfast.

Following the paramilitary ceasefires in the 1990's, there began a period of relative peace in Northern Ireland, and Belfast city centre witnessed significantly less security attacks. By the 2000's, an area around St. Anne's Cathedral and Ulster University's Belfast campus saw significant growth in entertainment and arts provision. This

area is now known as the Cathedral Quarter. Hotels, theatres, venues, restaurants, cafes and bars have appeared along with other service businesses. Some high-end apartments have also been built, which account for the relative levelling-off of the graph in Figure 4-8 from 2000 onwards, however their scale in relation to the city is still quite small.

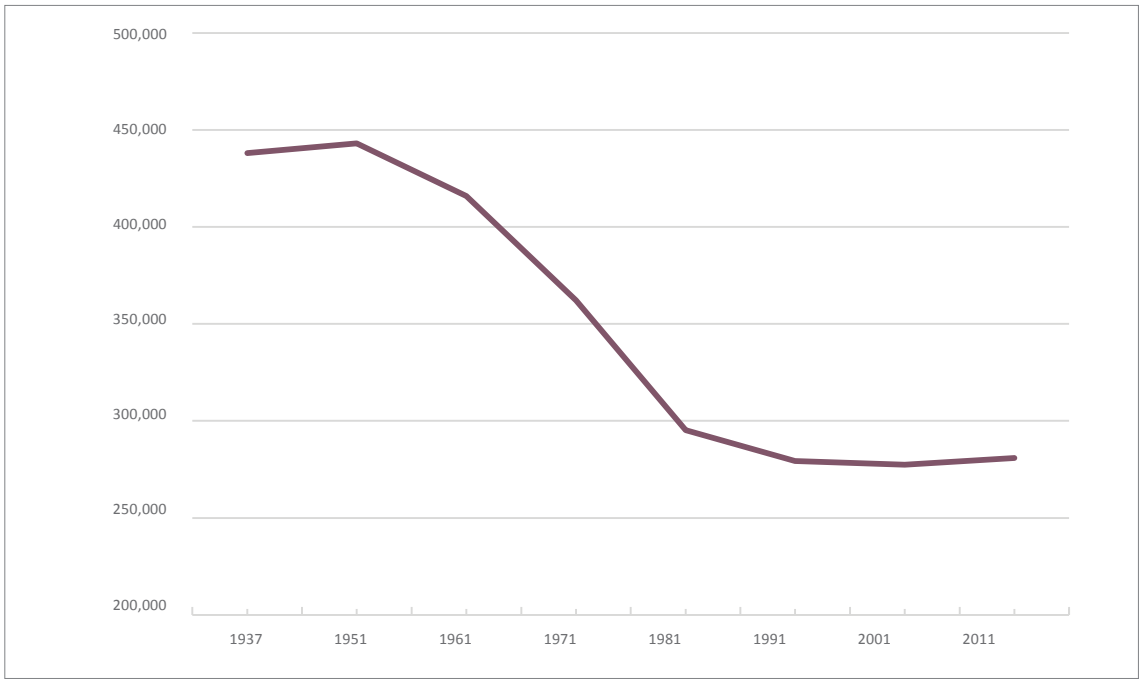


Figure 4-8 Population change in Belfast 1801-2010. Author's own, compiled from multiple sources at (Northern Ireland Statistics and Research Agency, 2010a)

4.2.2 Methodological procedures in Test Study 1

SpatialGT was tested in two sites of ethno-national contest. Both sites were in North Belfast and have interface barriers separating predominantly PUL and CNR residential populations. Other typologies of ethno-national contest exist, such as Orange Order parade routes and Twelfth of July bonfire sites. These sites are not so clearly demarcated as permanent as interfaces, and so they are not included here in this study. That is not to say that SpatialGT does not have an application there also This is discussed further in *Chapter 7.*

Some information on Northern Ireland peace walls is given here by way of a background to this study.

Peace walls are variously defined as structures "built by statutory bodies for the purpose of preventing violent hostilities between antagonistic communities" (Nolan, 2014, p.70) and as "the common boundary line between a predominantly unionist area and a predominantly nationalist area" (Belfast Interface Project, 1998, p.4). The former definition by the Department of Justice (DoJ) establishes the primary function of interface structures as division, as a top-down security measure, with a clear statutory agenda. Conversely, the latter definition by Belfast Interface Project relates more to a conceptual notion of interface as boundary, and highlights the particular identities of the adjacent 'interface communities'. It is no surprise then that these organisations, by virtue of their differing definitions, count different numbers of peace walls, in different locations. Moving beyond these definitions, academic discourse and research has focused on many aspects of peace walls such as their secondary functions; "solidify(ing) social relations and prevent(ing) interaction" (McAtackney, 2011, p.72).

Many factors come to bear on the creation and maintenance of safe, shared space that supports sustainable development; it is not simply created by removing walls. Only by understanding how a sense of safety, identity and security in contested space is constructed and maintained can new policy seek to support it in a progressive way.

Northern Ireland peace walls offer a unique typology of contested space, where the built environment has been constructed as a direct response to the consequences of conflicting senses of identity. The social and political contexts of interface barriers are rooted in the violent history of the Northern Ireland Troubles, and peace walls

are still a divisive socio-political issue. ‘Peace wall’ is the term used in common parlance to describe the barriers, regardless of their construction. ‘Peace line’ is another widely used term which encapsulates not only physical walls and fences but also gates, buildings, road natural features and spaces which serve the function of dividing communities in the interests of security. More recently, ‘interface barrier’ is used in research, policy documentation and the media. In this thesis, these terms should be read as interchangeable, as there is no distinction between them that bears any discussion here. The issue of terms, their use and distinction may warrant further investigation as efforts to reclassify and “reimage” peace walls intensify.

Northern Ireland has a traumatised, prolonged and continuing relationship with peace walls. Three weeks after the deployment of British Army troops in Northern Ireland in late 1969, the first peace wall was constructed in Belfast, separating the CNR Falls Road from the PUL Shankill Road (note that the use of the identity classifications is somewhat anachronistic in this historical context but is used for the purposes of simplification in this thesis). This contemporaneous quote speaks to the intention that the structure should be temporary in nature:

> *It was agreed that there should be no question of the peace line becoming permanent although it was acknowledged that the barriers might have to be strengthened in some locations. (Joint Security Committee, 1969, p.1)*

Barriers separating predominantly urban, working class, PUL and CNR communities were built on an ongoing basis throughout the Northern Ireland conflict and beyond (Jarman, 2012). Like the first one, all subsequent structures are classified as temporary. They were mostly constructed by the Northern Ireland Office (NIO) and are now owned for the most part by the Department of Justice (DoJ). Of the ninety

nine ‘security barriers and forms of defensive architecture’ identified by the Belfast Interface Project, one third have been built since the 1998 Good Friday agreement and associated ceasefires (Belfast Interface Project, 2014).

The most recent construction to fall into the category of interface barrier is a ‘peace curtain’ built on the grounds of a Catholic church in East Belfast in November 2013 dividing a CNR area from a PUL area. This is a retractable wire mesh structure which is to be drawn only at times of disruption when missiles are likely to be thrown from one area into the other. This ‘part-time’ interface barrier (which is in reality permanently drawn) marks a new direction in the DoJ’s security response, suggesting that whilst they are not seeking to add to the number of barriers they still consider them an effective security measure under certain circumstances. The curtain symbolises the ambivalence around the issue of removal, reduction and reimaging of interface barriers in Northern Ireland; its inherent design is removable, reducible and presents a different image to the communities on each side. Compared to the brick, concrete and fencing of other structures, this mesh design offers more visual transparency, which might be read as a symbol of a clearer, transparent process of decision making around peace walls generally.

Figure 4-9 shows the location of all peace walls as identified by the Northern Ireland Office (2006), overlaid on the same shading for percentages of Catholics as in Figure 4-5 on page 100. As can be clearly seen, a spatial correlation exists between the location of most peace wall structures and the peripheries of areas with very high percentage of Catholic residents, marked in darker green.

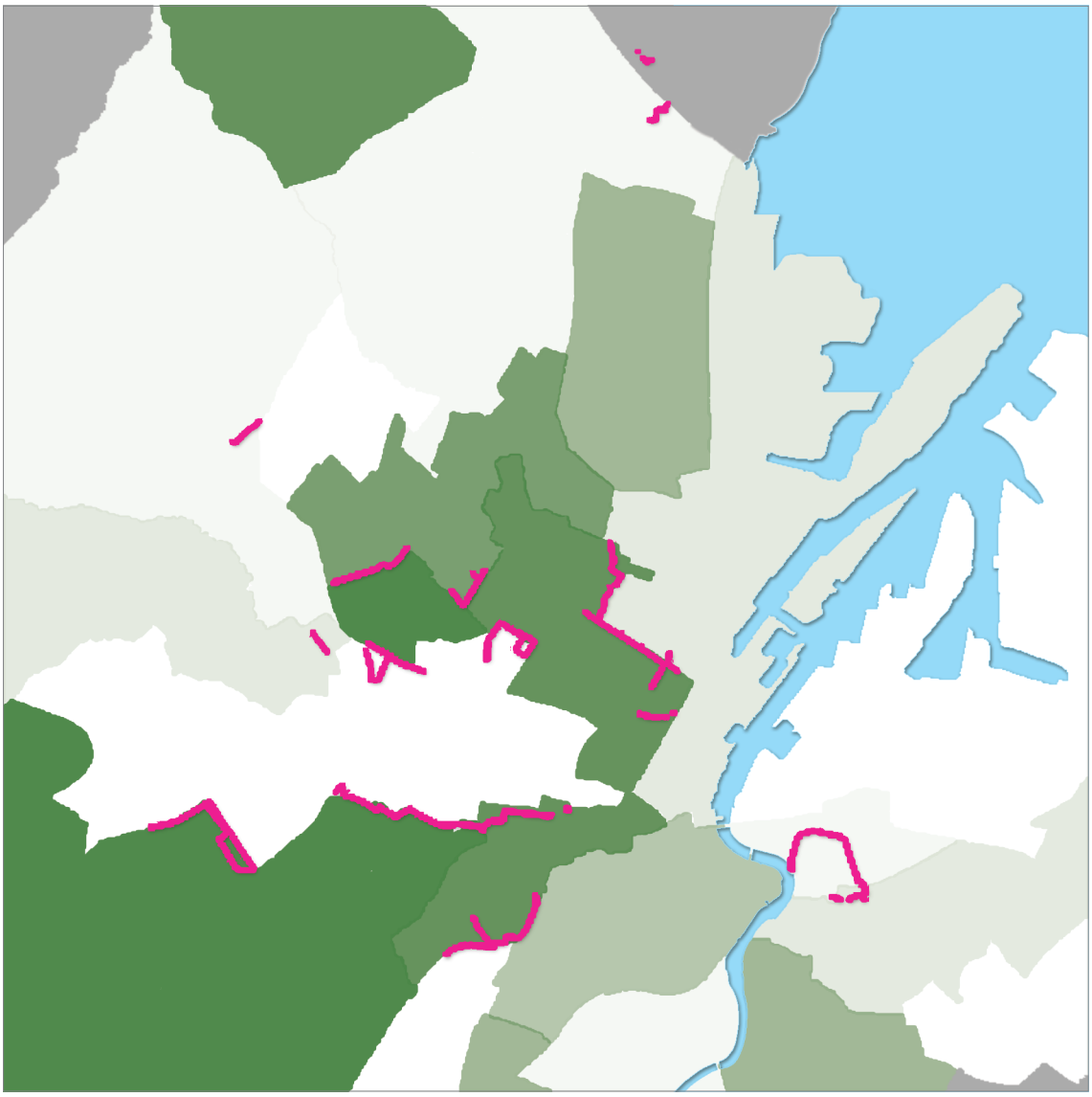


Figure 4-9 Map of Belfast wards (nts) with percentage of Catholics shaded (author's own based on data sourced from NISRA (2011) with peace walls marked in pink (Source of peace line ESRI shapefile: NIO, 2006)

In 1969, Boal produced a series of maps of two residential neighbourhoods in North Belfast that tell the story of a divided city (1969). These two communities - Shankill and Springfield - were distinct and separate in terms of their religious identity, the newspapers they read, locality nomenclature, routes to city centre, retail movement patterns, and movement to other areas in the city. The phrase 'ethnic enclosure' was used to describe the way in which these two communities were spatially divided

along ethno-religious lines. Ironically, Boal's research was carried out months before the first peace wall was erected, which spatially divides these two communities. The introduction of the peace line did nothing by way of changing these existing patterns of activity, but served only to inscribe it in the built environment, where it remains today.

Lloyd used outputs from the 2001 Census of Population of Northern Ireland to compare distributions and relationships of using geographically weighted statistical measures of spatial concentrations of different population characteristics. Those characteristics were "community background ('religion or religion brought up in') … housing tenure, employment and other socioeconomic and demographic characteristics" (Lloyd 2010, p.1193). The conclusion of this research was that "population is more structured by community background than by any of the other characteristics" (p.1216). While this quantitative, spatio-statistical methodology builds layers of meaning onto existing statistical data on Northern Ireland populations, Murtagh (2011) claimed that to build an empirical understanding of contested cities an "appreciation of the interplay between ethnic segregation, gentrification and class restructuring is needed to understand urban strategies of dispersal and disaffiliation" (p.213). Byrne et al. (2015) updated a previous report on attitudes to peace walls (2012) and offers several points of comparison 'then and now'. It reveals significant changes in attitudes in the intervening three years stating that "relationships between the communities have grown more suspicious and that the appetite for change evident at earlier times has diminished in 2015" (Byrne et al., 2015, p.33). Interface areas remain extremely divided spaces with both sides of the community still uncertain about removal. There are high levels of sectarian

violence, anti-social behaviour and mistrust of the 'other side'. Ironically, "more policing", and CCTV cameras to be installed in the area" were seen as the most important preparatory steps to removal (ibid., p.23); alternative security measures, that is, to prepare for the removal of an existing security measure.

Peace walls act not just as security barrier between conflicting communities by limiting access. They perform a range of other functions that are not easily translatable into traditional planning or security functions. They play a role in reinforcing ethno-national identity (Byrne et al., 2012). By reinforcing boundaries between areas of a particular identity in a fixed, physical way, peace walls are active in shaping the future expansion or contraction of such areas. In one test study, this function of the peace wall was described by residents as "holding back the wave of nationalist residential advance". The perception of a growing nationalist community in Belfast is not without a factual basis. Demographic analysis in the *Northern Ireland Peace Monitoring Report* (Nolan, 2014, p.22) identifies a "demographic tipping point" between 2001 and 2011 when for the first time in Belfast's history, there were more Catholics than Protestants. Such asymmetrical growth in populations inevitably leads to asymmetrical demand for housing on either sides of the interfaces. The peace walls have also been identified and highlighted as a stumbling block, or marker, for lack of investment. The UK government has explicitly made a connection between the removal of interface barriers and economic growth:

> *Above all, what we need is politicians in Northern Ireland to build a shared future, to take down the peace walls, and to make sure that the economy can grow and opportunities are there for everyone in Northern Ireland. (Department of the Official Report, 2014).*

Interface areas have not benefited economically as a result of the relative peace since the Good Friday Agreement (Byrne et al., 2015). Alongside sectarian division, issues of poverty, social deprivation, local educational attainment, weak infrastructure and issues affecting young people affect interface communities (Northern Ireland Executive, 2013). Whereas removal of the peace walls is a goal for the government and the related agencies named above, tackling those other issues such as poor mental health, anti-social behaviour, lack of opportunity, poverty, and its associated hardships are priorities for interface residents. In areas of the city where such social issues dominate alongside fear and division (Shirlow, 2003b) it is hard to see how community consent will be achieved for removal of peace walls.

Another role of interface structures that has emerged in the course of this research is that of memorial; either to a single event or to an ongoing pattern of violence. A gate described as a "2 metre high automatic cover from view pedestrian gate topped with 1m high metal palisade fence" (BBC News, 2009) was erected in an alley between Graymount Crescent and Whitewell Road in 2008. The local community acknowledge a direct correlation between the erection of this gate to a sectarian attack in July 2006, when armed, masked loyalists used the alley to access the nationalist Catherine's Court from loyalist Graymount Crescent and attacked nationalist houses and cars there. The nationalist community had been "calling for some kind of gate on that entry for years" (McCaffrey, 2005) and following this event, the NIO began a process of consultation which eventually led to the installation of the gate. Despite considerable cross-community work and relative good relations in the area, the gate remains open only during the day and closes automatically in the evening. If the gate is considered a memorial, then it serves to

both honour the memory and reactivate the fear of traumatic events that occurred a decade ago; these events did happen, they were shocking for both sides of the community, and the fear that something similar might happen is as real as the gate. It is impossible to separate the functions of this gate as a safety mechanism and as a memorial.

Contrary to the ongoing public and security demand for peace walls, The Northern Ireland Executive has committed to actively seek local agreement to reduce the number of 'peace walls' (Northern Ireland Executive, 2012, p10). The peace walls will not be removed 'without engagement with, consent and support of the people who live there' (Northern Ireland Executive, 2013, p.54). To oversee and implement this process, an Interface Working Group (IWG) was formed, "to regenerate interface areas, leading to the eventual creation of open and vibrant communities free from fear, threat or any obstacle to interaction across the region" (Interface Working Group, 2011, p.1). The Peace Walls Programme (PWP) upholds these aims and acts as a support to the ongoing cross-community work in interface areas, by developing and delivering "a range of confidence and relationship building interventions within and between interface communities to help residents reach a position where they feel it is safe and appropriate to proceed with the removal of Peace Walls in their area" (International Fund for Ireland, 2012, p.14). In 2015, the Executive set up the Together: Building a United Community Engagement Forum the aim of which is to "enable the voluntary & community sector to address T:BUC implementation issues, identify good practice and make practical and innovative recommendations for improved delivery" (The Executive Office, 2017). This marks a shift in focus from an outcome-based approach to a more procedural one

The geographic locations of the interface locations for study was in Gunnell Hill/ Serpentine Gardens (Site 1a.) and Lower Oldpark/Cliftonville in North Belfast (Site 1b.). These are marked in the map in Figure 4-10 below. A more detailed rationale is given for the selection of these sites in the sections below.

Figure 4-10 Locations of interface sites 1a and 1b (in red)

The choice and nature of interface studies (defined and discussed later) was influenced by the author's relationships with community organisations in contested spaces in North Belfast, and her resulting access to data and participants through University research projects. Whilst these projects presented the author with valuable opportunities for access and relationship-building, there were also some

significant draw-backs to this way in to the research field, not least of which was the lack of control over timelines. On balance though, the benefits of this approach out-weighed the limitations in that the amount of participants and the richness of data gained via the various collection methods would not have been achieved had the researcher cold-called residents in these contested spaces. There are multiple 'accepted narratives' in Northern Ireland interface areas which might only be told at the right time to the right people. It was felt that access to interface communities via the community organisations would provide not only direct access but also a safe and supported environment for participants and researcher alike. The approach to access participants via community representatives was continued into the second test study.

Whilst a considerable amount of work done by interface community organisations is cross-community - building social cohesion and shared space - the individual worker themselves would not be in a position to work across the community divides. Instead, the two sides of the community are represented by different representatives who work side by side within the organisation and are engaged separately for the most part. This method -employed regularly in cross-community development work - is referred to as the "Parallel Process Approach" and is defined thus:

> *'Parallel Process Approach': Development work is carried out separately with Protestant and Catholic groups on each side of the interface, often by workers employed by a joint management committee and working in parallel on issues such as capacity-building within each community; cross-community contact and/or co-operation on common issues is promoted only where this is appropriate and after careful consultation and preparation work has been carried out. (Belfast Interface Project, 1998, p.13)*

4.2.3 Site 1a Gunnell Hill/Serpentine Gardens

Gunnell Hill/Serpentine Gardens was one of several interface sites that were part of a wider "Greater Whitewell Re-imaging" project conducted by the Ulster University Built Environment Research Institute and commissioned by Greater Whitewell Community Surgery (GWCS) with the author as the primary researcher. The outputs of the work on the other sites were graphics panels showing maps and 3D modelling of alternative configurations and treatments of the peace walls (see *Appendix E.1* for sample visual). The Gunnell Hill peace wall has a formidable physical as well as emotional presence. GWCS stated at the outset that residents would be very resistant to changes to the wall. It was thought that graphical representations of revisioning (reduction, removal or reimaging) might alarm residents and alienate them from the consultation process. On this basis, the site was identified as a suitable study site for piloting SpatialGT as a method of engagement that would offer residents a forum in which to express the feelings about all aspects of the wall as a means to inform decision making about sustainable management of the structure. The key aim of this study was to record support or resistance to reduction/reimaging of the Gunnell Hill/Serpentine Gardens peace wall within the adjacent residential population.

In order to explore this aim, several objectives were identified:

- to document perceptions of why the wall was built and the role it plays in day-to-day life.
- to explore reasons behind for/against positions in relation to reduction/s
- to gather data that represents a balance of voices from both sides of the wall

As this was the first attempt at using SpatialGT, it was understood by all community representatives and participants that this was an evolving, experimental process

and they were invited to offer their feedback to it at any time. The data collection methods featured in this study were focus groups and interviews, reflective diary and memo, and notes on project meetings and email correspondence.

The study focused on residents whose homes are bounded on at least one side by the interface barrier, as shaded in purple in Figure 4-11 below.

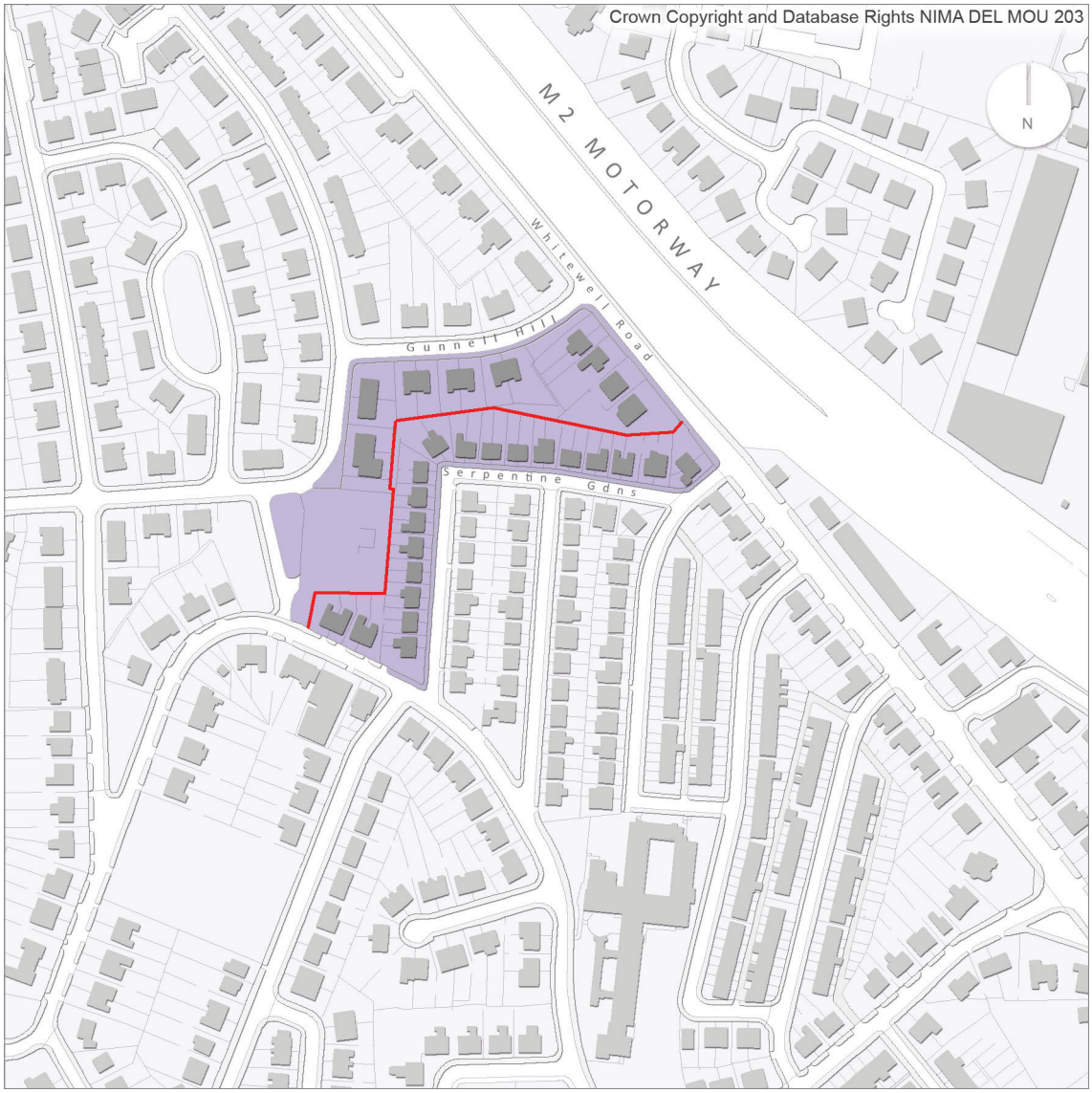


Figure 4-11 Location of interface barrier at Gunnell Hill/Serpentine Gardens

The map in Figure 4-12 illustrates the multiple deprivation ranking for the Super Output Areas that cover Site 1a. (note: low ranking equates to high deprivation

index). As can be seen, *proximity of services* is the only ranking in which the area scores highly. Otherwise, it has high deprivation across the other indices.

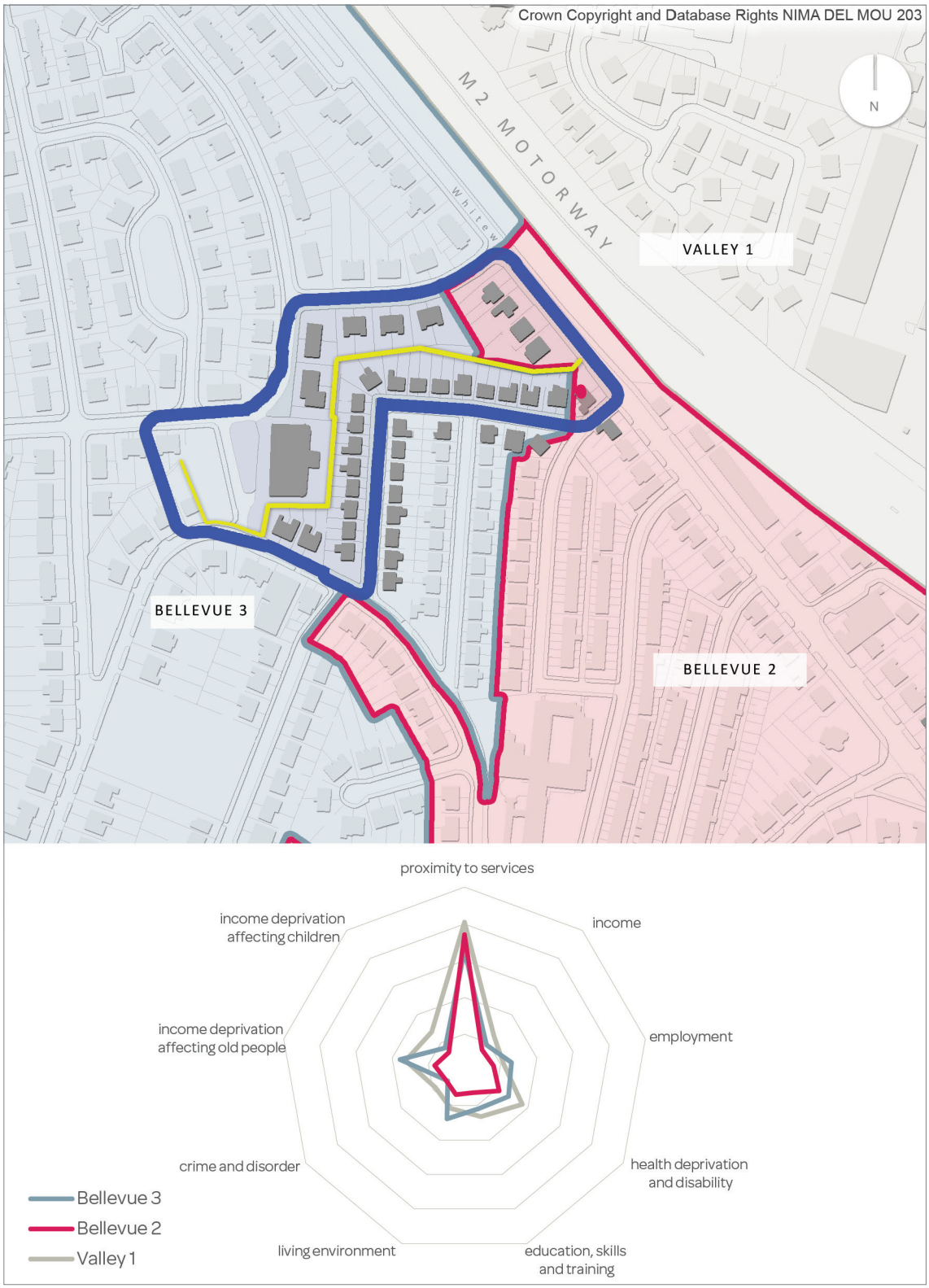


Figure 4-12 Greater Whitewell - Super Output Areas and Multiple Deprivation rankings for Valley 1 and Bellevue 2 & 3 (author's own, based on data from NISRA, 2010b)

The GWCS representatives, as e*xperts* to the research process-verified information, interpretation at several stages and provided formal and informal interviews and focus group sessions to the data gathering process.

Recruitment of residents to the reach project was carried out by GWCS representatives, supported by the researcher by way of provision of information packs. Additionally, an information event in a local community centre was organised and an audio-visual presentation was delivered to local residents.

4.2.3.1 Topic Guides

Prior to data gathering, a literature scope, meetings with community experts and consultation with research supervisors led to the development of an initial topic guide for discussion. The first round of data was gathered from an initial interview with a community representative in order to check that the topic guide was suitable for discussion with residents and to see if any key issues or concepts had been overlooked. On the basis of this interview, the topic guide as detailed in Table 4-3 below was confirmed as suitable.

Table 4-3 Topic guide for initial focus group session at Test Site 1a

1	The Northern Ireland Executive commitment to remove peace walls by 2023. Are communities consulted on these policies?
2	Perceptions of the fence: how do residents living next to it perceive it?
3	Reduction of the fence: positive/negative feelings about reduction. Why or why not.
4	Re-imaging of the fence: positive/negative feelings about re-imaging. Why or why not

The topic guide for the complete study were emergent and open-ended, providing groups/participants the opportunity to steer the discussion towards additional significant subjects. Subsequent topic guides evolved based on data gathered.

4.2.3.2 Sampling

The area marked in purple in Figure 4-13 below represents all properties that are bounded on at least on side by the peace wall. Residential properties were identified within this area as a suitable starting point for data sampling.

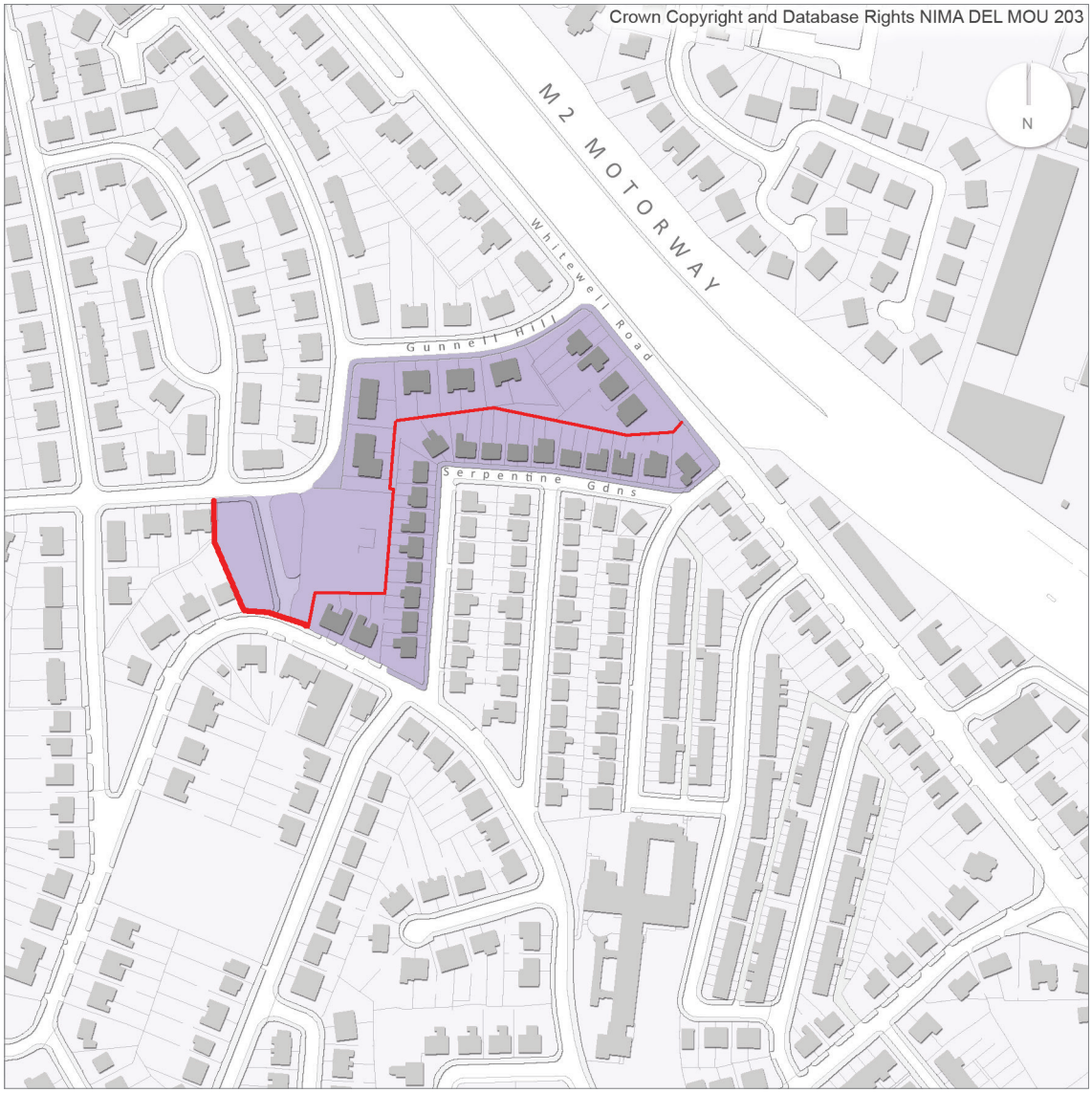


Figure 4-13 Study area at Gunnell Hill/Serpentine Gardens

4.2.3.3 Recruitment

Recruitment was carried out by the experts, who have a long-term relationship with residents of the communities on both sides of the peace wall. It was agreed by all

concerned that GWCS would identify members of the community who would be interested in joining the study and contributing to it via focus groups or individual interviews. The author support this by attending and providing relevant information to prospective participants.

An information evening was held in White City Community Centre for residents of White City. The author attended this evening, presenting herself, the project and the focus group process. Information for Participants documentation and Focus Group Consent Forms were distributed, and a lively discussion of the main themes occurred with the five residents in attendance that night. Further invitations were given by word of mouth by the PUL community representative and the attendees of the information session.

Numerous conversations about the project were held with residents on the CNR-identified Serpentine Gardens side of the wall between residents and GWCS representatives but no information evening was held, no recruitment took place and subsequently no focus groups or interviews were held. This led to a critical imbalance in the data collected, and the hoped-for “parallel process” did not occur. Nevertheless, the available data was analysed and important findings - about the demarcation of and relationships between interfaces, multiple narratives held about interfaces by communities and the emotional significance of the structures and spaces that divide and maintain identities - were revealed. Thus, whilst it is acknowledged that it lacked the rigour that might otherwise have been achieved if both sides of the community had contributed, the study is valuable in terms of the lessons learned in the practical use and implementation of SpatialGT and the potential barriers which need to be overcome.

4.2.3.4 Data gathering

Data consisted of recordings of focus groups and interviews, notes from meetings and focus groups and reflective memos written by the author. As well as these discreet events, there were numerous other meetings between GWCS representatives and the author relating to the wider University research project, during which relevant notes were taken.

The initial interview with the community representative marked the first formal data collection event. This was transcribed and added to the body of data for analysis. Following the information evening in White City, a focus group was held in the same venue one week later. Three residents of homes adjacent to the interface barrier attended the focus group along with the PUL-identified expert. Each question of the topic guide was discussed and blank maps from a variety of sources; OpenStreetMap (2017), Mapbox (2017) and Land & Property Services NI (2017) were examined, discussed and used for mark-up purposes. Data were verified immediately after the meeting with the relevant community representative. Following this, a focus group was held with the three community representatives to verify findings of the resident focus group and to collect additional data. The key topics for this focus group were the mapped outputs so far and next steps in data gathering. Data gathering events are summarised below in Table 4-4.

Table 4-4 Summary of data gathering events in Test Study 1a

Meeting no.	*date event*	*identifier*	*description*
1	07.11.13	GHm1	Meeting with experts
2	04.03.14	GHm2	Meeting with experts
3	03.05.14	GHm3	Semi-structured interview
4	12.09.14	GHm4	Information event
5	08.10.14	GHm5	Meeting with experts
6	09.10.14	GHm6	Focus group
7	03.02.15	GHm7	Focus group

4.2.3.5 Verification, triangulation, audit trial and peer review

Verification and triangulation were provided by member checking with GWCS representatives during interviews, focus groups and meetings. This was carried out verbally and in some cases, was prompted by mappings. An audit trial was kept of reflective notes and comments. Peer review of the analysis of a smaple transcript was provided also by the supervisory team.

4.2.4 Site 1b Lower Oldpark/Cliftonville

Lower Oldpark and Cliftonville are in North Belfast and have a long history of sectarian violence. The Lower Oldpark/Cliftonville interface lies near Nationalist Cliftonpark Avenue, a key site of sectarian violence in the Troubles. This road was nicknamed ‘Murder Mile’ due to the high numbers of sectarian murders in the 1970’s. The interface was erected early in the Troubles in response to this sectarianism. There is relative peace in Cliftonville and Lower Oldpark now, however sectarian violence does still occur and clashes between the respective nationalist and loyalist communities are ongoing. The areas remain segregated in terms of ethno-national identities. The two communities have worked in partnership for many years to

build peace and to support development to the area, which has high levels of social deprivation (as illustrated in Figure 4-14) and high demand for social housing.

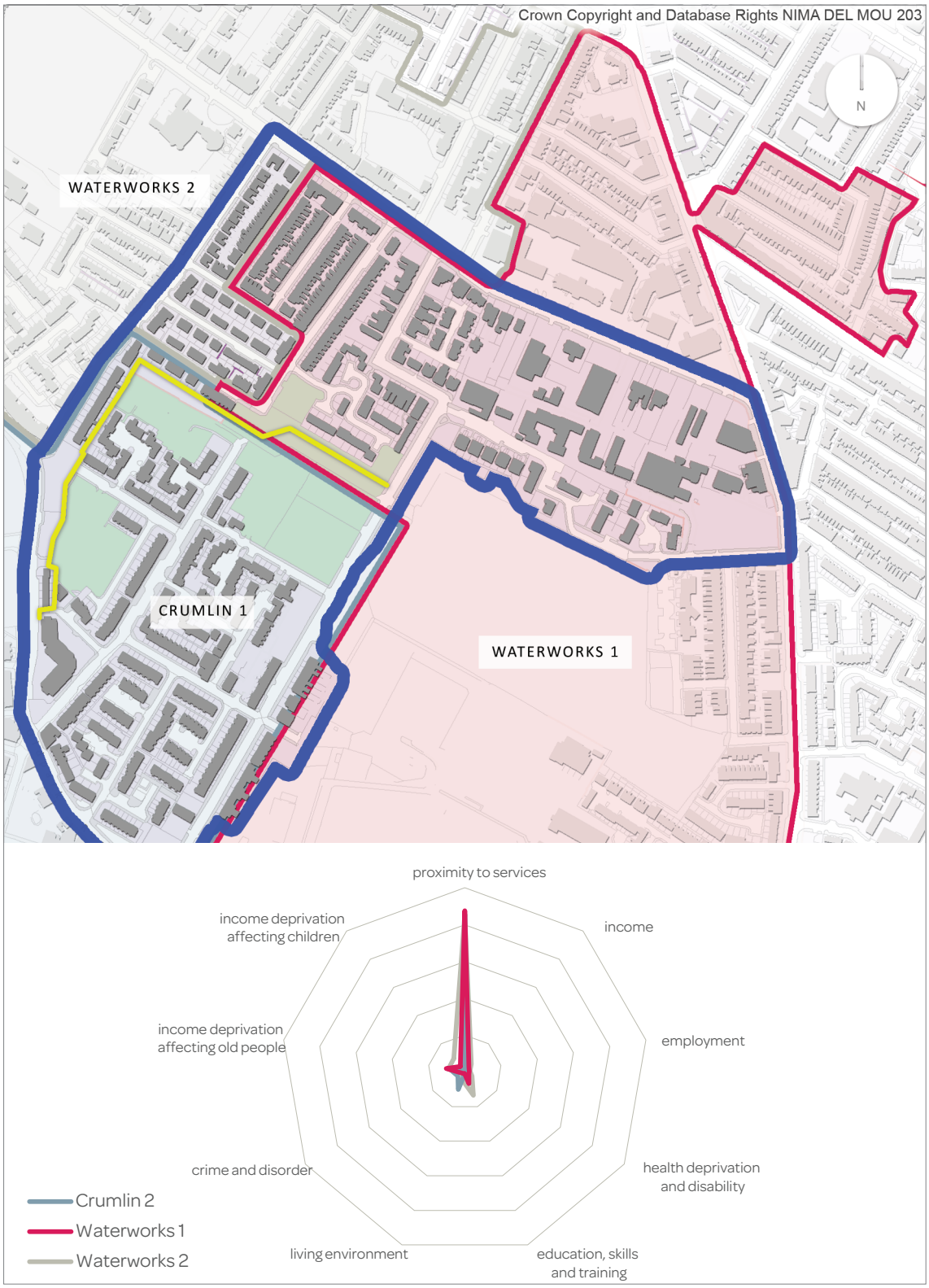


Figure 4-14 Lower Oldpark/Cliftonville - Super Output Areas and Multiple Deprivation rankings for Crumlin 2 and Waterworks 1 & 2 (author's own, based on data from NISRA, 2010b)

Figure 4-15 below shows the location of the Girdwood site which was recently redeveloped. A former army barracks, the Girdwood site acted as an interface between the east side of Lower Oldpark and the nationalist area along Antrim Road further to the east. The Girdwood site is now a shared space development with sports facilities and housing. This development, in particular the removal of the boundary wall to the west of the site, has challenged the Lower Oldpark community's sense of enclosure.

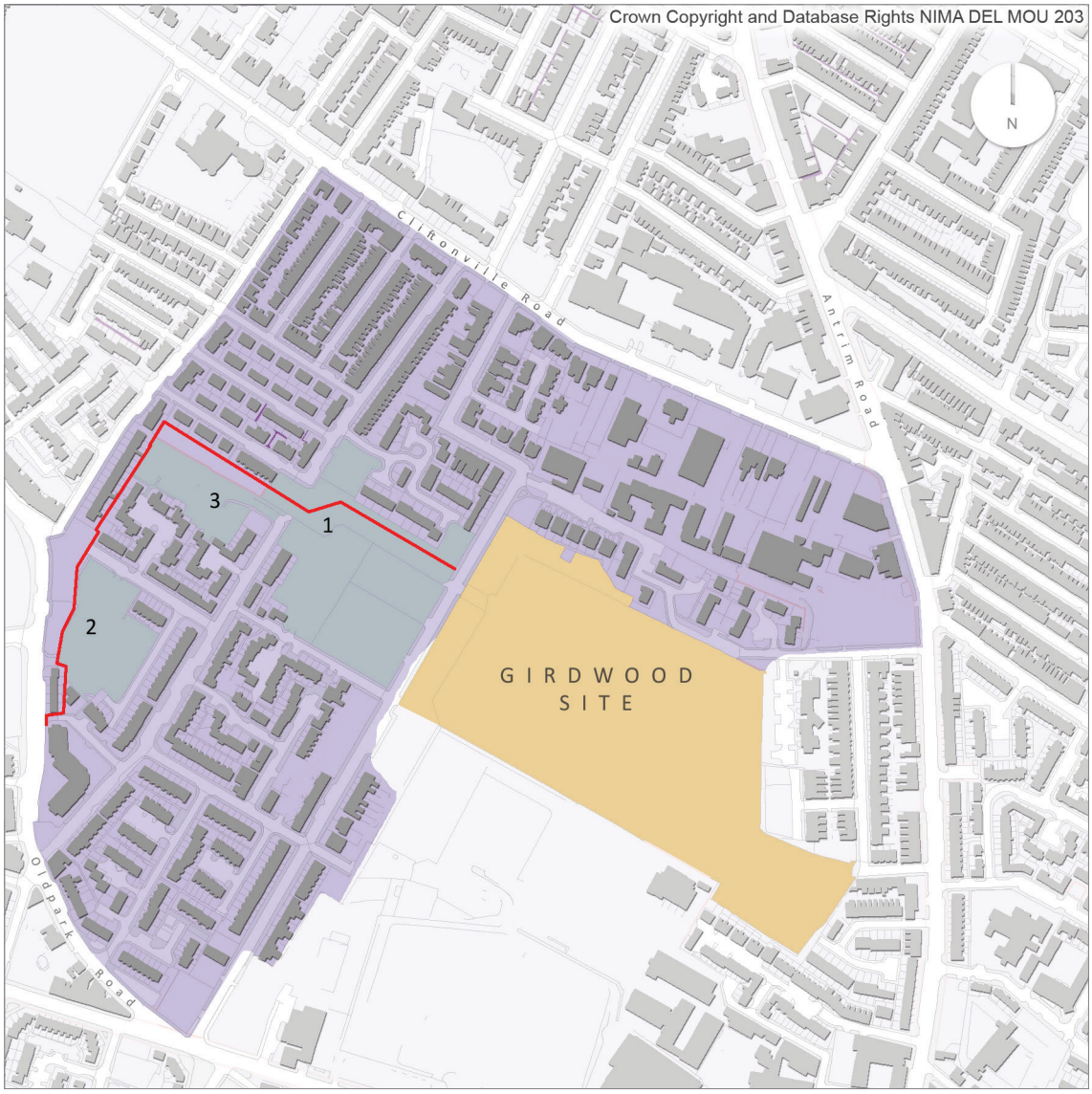


Figure 4-15 Map (nts) showing Lower Oldpark/Cliftonville area in yellow, the interface in red

The Lower Oldpark and Cliftonville interface structure is extensive, over 500 metres long, dividing the residential areas known as Lower Oldpark (PUL) and Cliftonville (CNR) and bisecting Manor Street and cutting Mountview Street off at one end. Some sections are constructed of solid brick while others are steel-framed and clad in corrugated metal. Others are topped with fencing above the solid sections. Figure 4-16 shows a juncture in the wall which exhibits a variety of these finishes, materials and heights. The height of the corrugated section varies between 4 and 5 metres. The lower brick section is around 3 metres high and the fencing on top of this brings the height of the barrier to over 6 metres. In some sections, corrugated metal is used instead of fencing at the upper level (see photo insert).

Figure 4-16 Photographs showing various finishes and heights of Lower Oldpark/ Cliftonville peace wall

Note the fence in the foreground of the main picture in Figure 4-16 defines the extent of a 'no man's land' or safe zone adjacent to the south side of the wall which is marked as '1' in Figure 4-15. Elsewhere, residential and commercial properties

adjoin the wall. As can be seen in this map, there is more open space on the south, Lower Oldpark side of the wall. The areas marked ‘2’ and ‘3’ were formerly residential zones where houses have been demolished.

4.3 Test Study 2 - Residential contest

The second study, presented in detail in *Chapter 6*, was conducted in the Holyland, an inner-city mixed residential zone in south Belfast (see number 2 on the map in Figure 4-3 on page 94). The area is so called as it encompasses several streets named after areas in the Middle East; Jerusalem Street, Palestine Street and Damascus Street. The housing stock is mostly two or three storey terraced housing in a very dense, typical working-class Victorian street pattern of wide avenues and narrow, connecting side streets, one of which is illustrated in Figure 4-17 below. No open spaces were zoned at the time of construction and due to the high demand for property in the area, there are still no open spaces.

Figure 4-17 Carmel Street (author’s own)

4.3.1 Background to the Holyland study

The exact spatial extent of the Holyland is a matter of debate. While some residents identify the Holyland as the small area including the named streets mentioned above and several other adjacent areas, it is often thought of as a larger area extending to a swathe of Victorian residential streets east of Botanic Avenue. Participant observation and policy documentation reveal other locations around Queens University Belfast (QUB) with high numbers of student tenants, (such as Stranmillis and Eglantine Avenue) being referred to as 'Holyland 2' (Browne, 2012, p22). This is due to the worsening of issues relating to student behaviour that mirror the current state of the Holyland proper This term is most likely used about these areas in cautionary way as they have very different characteristics in other respects. What is clear is that most people define the extent of area by a combination of characteristics that are not necessarily spatial. The reputation for disruption and contest between students and other residents would appear to be a key defining characteristic.

As can be seen in Figure 4-18 below, the four Super Output Areas of Botanic 2, Botanic 3, Botanic 4 and Botanic 5 that cover the Holyland all have very low crime and disorder rankings indicating very high rates.

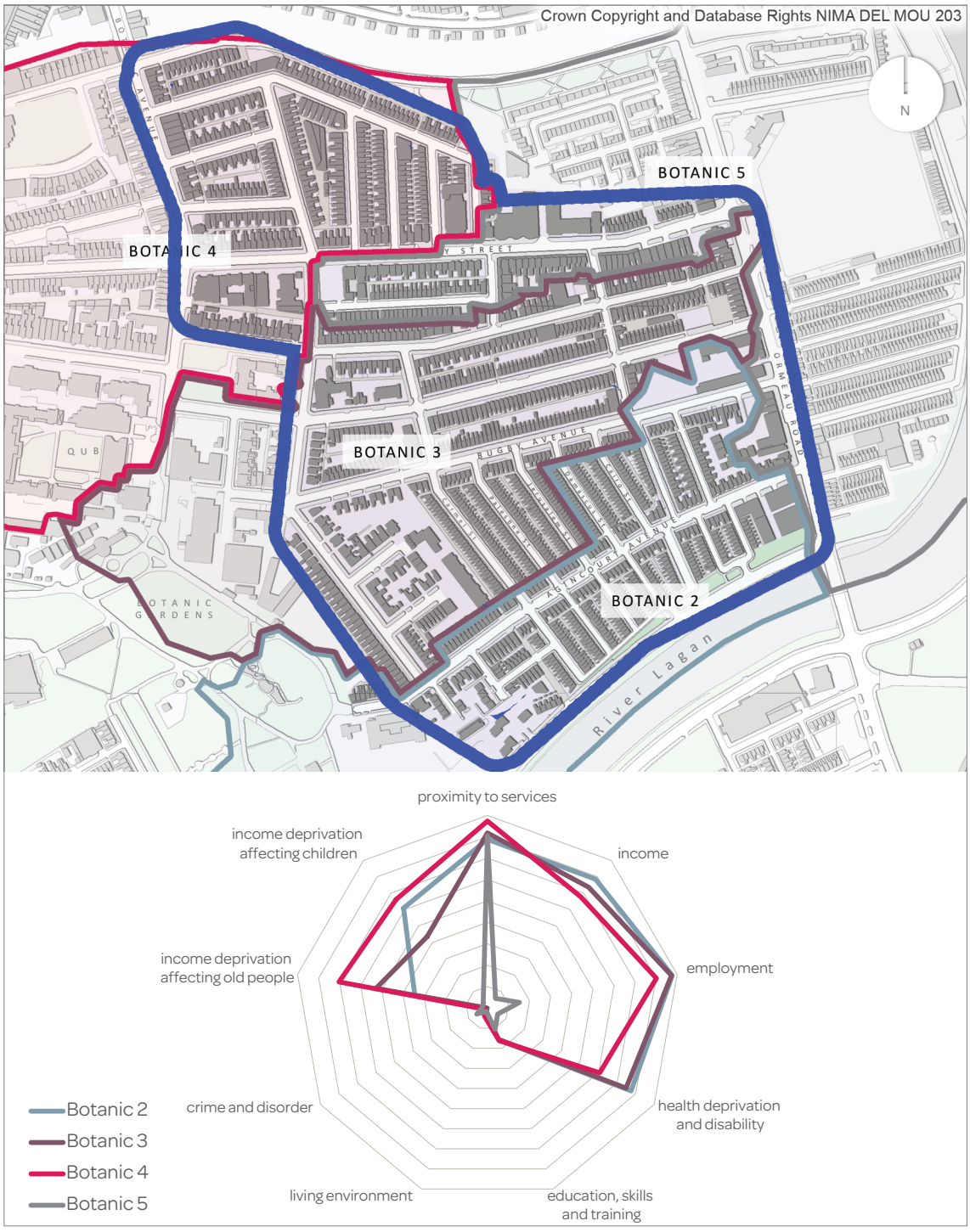


Figure 4-18 Map (nts) showing Super Output Areas of the Holyland with corresponding Multiple Deprivation rankings, author's own (data sourced from NISRA, 2010b)

Until the 1990's, the area was home to a diverse community comprising families, older residents, students and young people. South Belfast was an area with a

relative mix of CNR and PUL residents and the Holyland reflected this mix. It was considered a safe place for the relatively small Chinese community and for students and other young people from beyond Belfast. In the 1990's, there was a dramatic increase in the number of university places in UK universities generally. Student numbers increased from ~1.5million in 1994 to ~2.1 million in 2014. Figure 4-19 below shows this progression in graph form. The number of undergraduate degrees gained rose by 261% from 77,000 to 278,000 in the fifteen year period between 1990 and 2005 (Social & General Statistics, 2012).

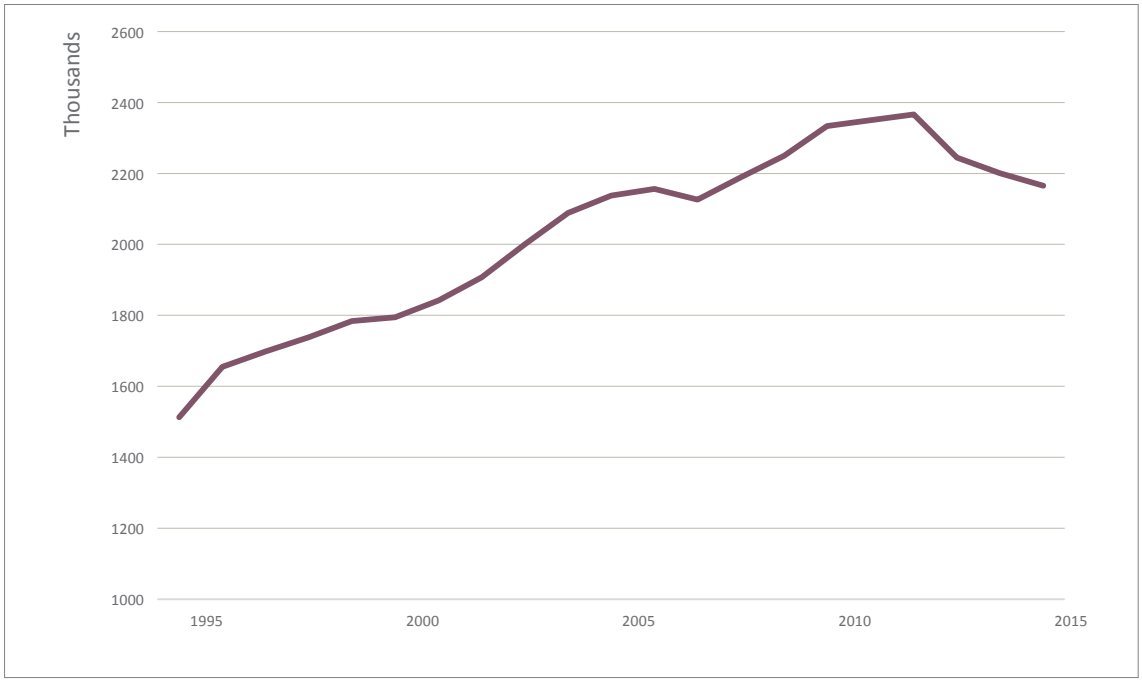


Figure 4-19 UK enrolled student numbers 1994-2014 based on 1 December snapshot (HESA, 2016) (author's own)

In response to this trend, many more resources - in particular student housing – were needed in university towns and cities across the UK. The indirect effects of student housing demand and other resources had a significant impact on areas near universities and the phenomenon is today known as studentification. The effects of studentification are discussed in more detail later.

QUB and Ulster University reflected the expanding trend of universities nationwide, and between 1994 and 2004, Northern Ireland undergraduate numbers increased by over 30% from ~23,000 to ~30,000 (HESA, 2016). The development of purpose-built student accommodation (PBSA) during this time did not meet housing demand, and so it was met mainly through the private rental of Victorian terraced housing in South Belfast. As can be seen in Figure 4-20 below, the number of private rental properties in South Belfast far exceeds any other Assembly Area in Northern Ireland.

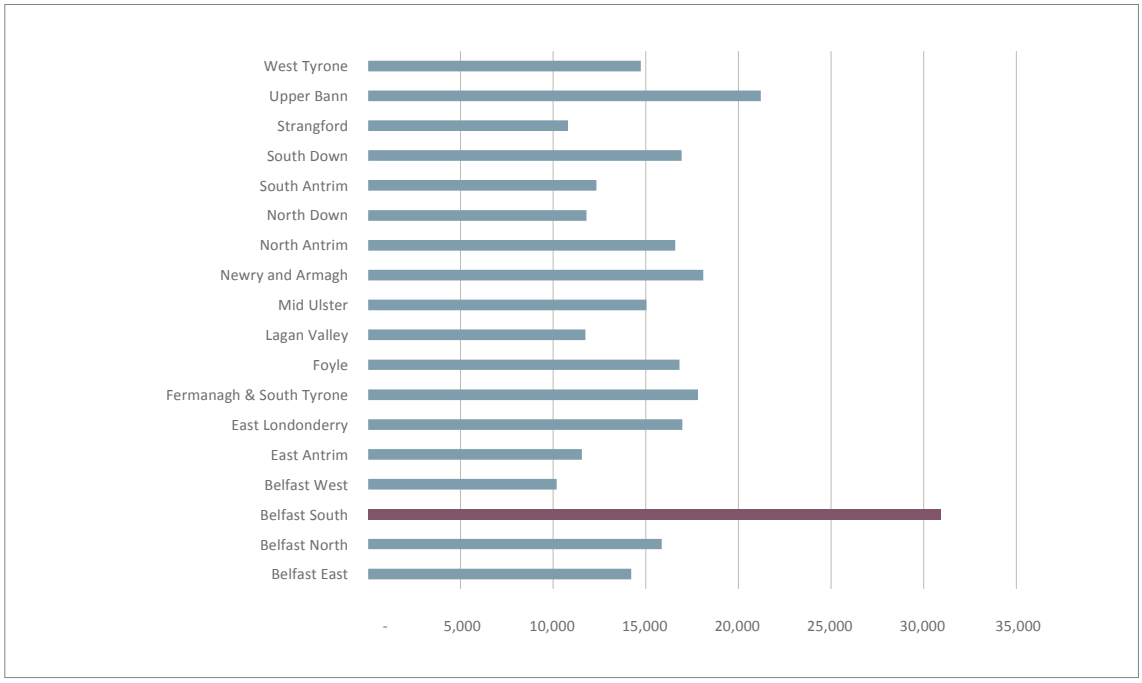


Figure 4-20 Numbers of private rentals in Assembly Areas (based on data sourced from NISRA, 2011) (author's own)

Student rentals began to dominate the areas all around QUB and many of the properties became Houses in Multiple Occupancy (HMOs) in order to accommodate higher numbers of students. In the Holyland, the density of students quickly overtook other resident groups and the area acquired a strong student identity and reputation as a 'student area'. This shift in demography to a student majority has remained,

and the effects of studentification here are more pronounced than in any other area in South Belfast.

The term ‘studentification’ (Smith, 2005) was defined to describe the phenomenon of increasing numbers of student populations and the associated consequences. The effects of studentification were compiled in Smith & Holt (2007) and are reproduced here in Table 4-5.

Table 4-5 The effects of studentification (Smith & Holt, 2007)

social	*economic*	*cultural*	*physical*
Demographic structure of the local population	Supply and demand for housing	Supply and demand for specific leisure, recreational, and retail facilities	Levels of private vehicle use, and cycling/walking
Levels of population density	Buoyancy of housing market	Levels of antisocial behaviour	Levels of traffic congestion
Levels of population stability/transience	Portfolio of housing stock	Levels of noise nuisance from households, pedestrians, taxis/ private vehicles	Levels of visual pollution (to-let signs)
Turnover of residents/ property	Flexibility of housing stock	(In)compatibility of lifestyles	Effectiveness of refuse and waste collection
Cohesion of local community and community interaction	Supply and demand for affordable housing	Supply and demands for levels of policing and emergency services	Levels of litter and rubbish
Levels of neighbourliness	Condition of housing stock		Upkeep of gardens and driveways
Meaning and symbolism of location	Spending levels within local economy		Upkeep of external environment
Supply and demand for schools, GPs, dentists, and other health services	Levels of inward capital investment		Levels of graffiti and vandalism
Supply and demand for public transport	Supply and demand for services of letting/ estate agents, property maintenance, and building contractors		
Effectiveness of crime prevention strategies and self-policing	Supply and demand for local retail, leisure, and recreational services		
Trends of criminal activity	Seasonality of local economy and services		
Levels of electoral voting and political affiliations	Levels of housing abandonment		
Effectiveness of car parking schemes and provision	Supply and demand for domestic services		
Strength of local voluntary schemes/ sector	Supply and demand for child care services		
Levels of alcohol/drug abuse	Levels of council tax revenue		
Health and well-being of local population	Local workforce		

Many of these effects are seen in the Holyland and are documented in this study.

Smith (2005) frames studentification in the broader field of gentrification, which is relevant to a certain extent in this study, however the Holyland and its immediate spatial context has not experienced the kind of generalised gentrification that student areas do elsewhere. Instead, it has become a student residential enclave with one general store, one café and one off-licence, and is poorly integrated into the wider South Belfast area. As can be seen in Figure 4-21 below, it is bounded by the river, a park, extensive university lands and an established working-class residential area. These geographic and zoning features might account to some extent for the lack of integration. In the absence of spatial integration, diversification of users and quality of services, the Holyland has not benefited from the gentrification that might otherwise have occurred.

Additionally, the Holyland has a unique reputation in Belfast for being a 'student party town'. Key dates in the Northern Ireland university calendar – Fresher's Week at the beginning of the first semester and St Patrick's Day on the 17 March - correspond to periods of intense and uncontrolled revelry among the student population and other young people focussed in the Holyland. The scale of partying at these times has distinct, negative effects for residents and authorities, including street clean-up costs of up to £2 million after St. Patrick's Day in 2016 (Black & Williamson, 2016). The Holyland's reputation as an uncontrolled party area is firmly reinforced every year at these times and is shared across Northern Ireland by media coverage as well as social media.

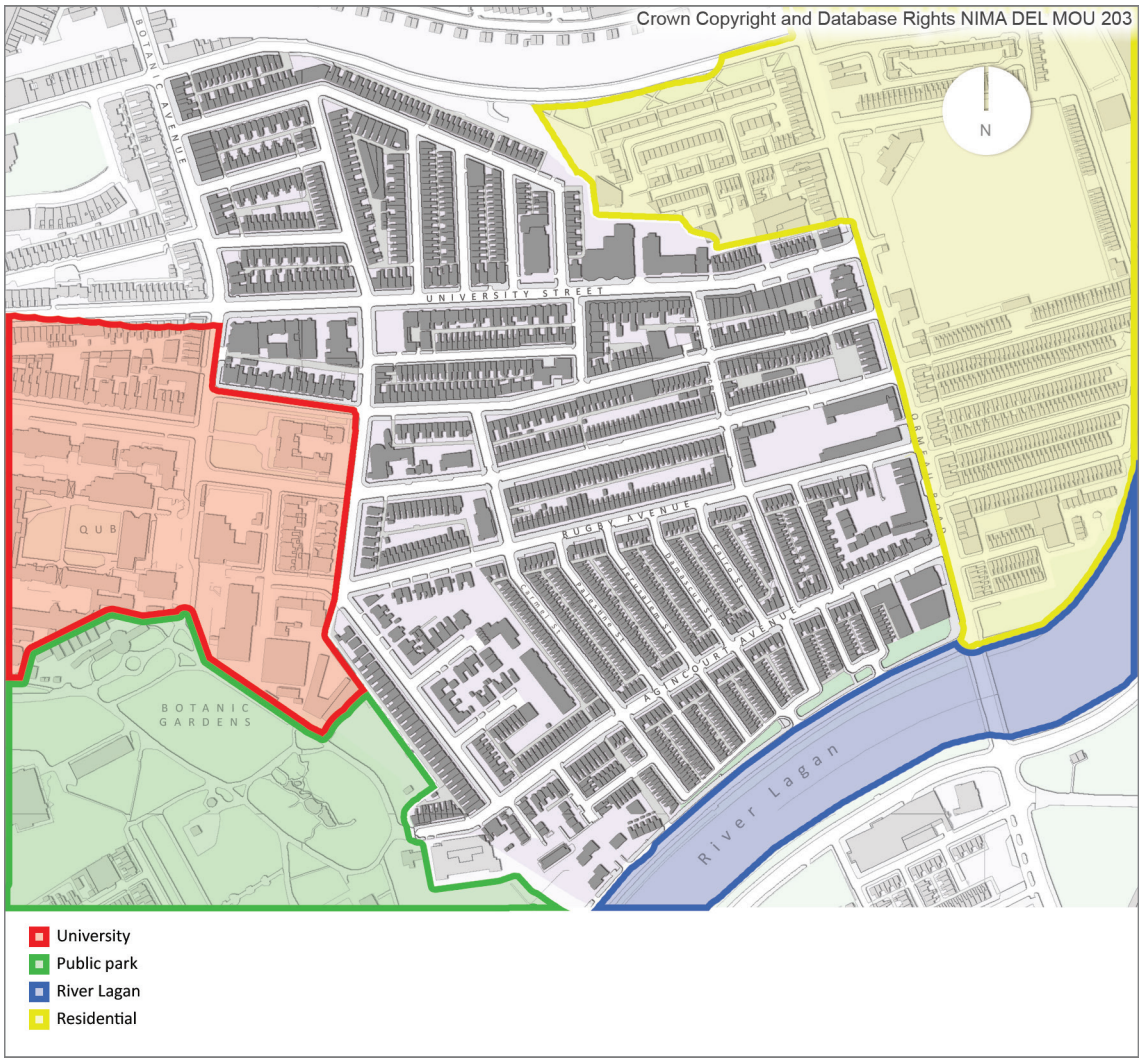


Figure 4-21 Map (nts) showing land use and landscape features bounding the Holyland

Mainstream media by way of paper, online and radio perpetuates the common perception of the Holyland as a student-dense party area, by covering stories of disruption, rioting and damage to property. Disruption during St Patrick's Day attracts media coverage each year. More recently, the media added multiple cases of verbal racist abuse to the litany of disruptive students behaviours such as "partying on the street, damaging cars, throwing missiles at houses and smashing glass" (Black and Williamson, 2016). In this case, over the course of two days, 183 incident were reported to the Belfast City Council, 22 students were reported to the Universities

and five incidents were referred to the PSNI. The media reports of the despair of residents and groups in the Holyland at the lack of management in the area also.

While studentification creates contest among different stakeholders in the Holyland, it is not the only source of conflict. High numbers from BME communities moved to the area. The majority of immigrants to Belfast live in East Belfast where it is understood that they form "replacement communities" (Shuttleworth & Lloyd, 2013, p.63). South Belfast is where the majority of ethnic minorities reside (Nolan, 2014, p.30). South Belfast is traditionally more of a 'mixed' community, with less residential segregation along lines of ethno-national identity.

In both areas, the presence of immigrant populations are seen as replacement communities, or 'back fill' as it is referred to anecdotally. In the case of the Holyland, ethnic minorities - in particular families of Roma/Romanian identity - are seen to replace local residents who leave the area because of the changing character or poor housing stock environmental degradation, or who cannot afford the inflated rent or property prices. Non-HMO rental properties can only be rented to family groups or up to two unrelated individuals and they are therefore not as profitable as HMOs. Landlords are able to return high rents for these properties by renting to Roma families, who often live in very large family groups with several generations living together. There is a cultural tradition of living in large groups among Roma communities, and their extreme level of poverty requires that they pool what resources they have to cover rent and living expenses. The density of occupancy in these family homes is higher again than in HMO.

In *Belfast: A Learning City. Holyland and Wider University Area Strategic Study*, Browne (2012) frames the future of Belfast as a learning city in terms of two key

issues: the future increase in need for student accommodation and services due to Ulster University's expansion of their Belfast campus due for completion in 2019, and higher expectations of student accommodation quality and the impact this has on choice of university (see Figure 4-22 for relative locations of Ulster University Belfast and Holyland). The approximate distance between the Holyland and Ulster University Belfast is 2 kilometres.

Figure 4-22 Map (nts) showing location of Holyland in relation to Belfast

The 75,000m^3 expansion of Ulster University Belfast campus is located in the north of the city centre. As no accommodation is to be provided by the university, the project has prompted the private construction sector to plan large scale Purpose Built Student Accommodation (PBPA) developments. By January 2016, over 1,000

PBSAs had received planning permission (Campbell, 2016), all of which are situated in the north of the city centre. The campus building along with the development of student facilities such as accommodation is set to have a significant impact on introducing a ’24 hour’ culture to what has traditionally been a commercial - and more recently entertainment - area.

4.3.2 Methodological procedures in Test Study 2

There are city-wide issues such as crime, immigration, the legacy of the Troubles on urban living, increasing demand for for short-term accommodation that come to bear on this area. The social, spatial and cultural issues that emanate from the area itself do not have much impact beyond the area, due to its relevant containment, although there is a growing impact on the adjacent Lower Ormeau Road which emerged during the course of this study. The Holyland provides an opportunity to test the new methodology in an area of contest in Belfast defined not along traditional ethno-national line but nonetheless with significant contest among user groups.

4.3.2.1 Data gathering methods

In advance of the formal ones, informal interviews were held with the Ulster University community relations officer and the head of one of the Holyland residents associations. The author attended several closed *Partners and Communities Together* (PACT) meetings and a public PACT meeting as well as a Holyland Residents Association meeting and spoke individually to people before and after these meetings. She met with members of minority groups such as the Northern Ireland Roma and Romanian Community Organisation (RRCANI) and the Muslim

Family Association Northern Ireland (MFANI). The occasion of these discussions were awareness training days organised by the community groups and in the case of the former, hosted by Belfast City Council They provided an opportunity for meetings and discussions between the wider community and the Roma and Muslim community members respectively on issues of culture, language, integration and minority status. Notes and memos were taken at all of these events. The information gathered here helped to establish an understanding of the current context and the main issues in the Holyland and also helped to identify interviewees. While this information is not necessarily indicated via formal reference in this chapter, it is embedded in many aspects of it.

Three methods were used in this study: observation, informal interviews, and formal interviews. These methods are described in detail in *3.3.3 Data collection methods* on page 71. An 'overt straight' observation approach was adopted in meetings to gather data. Field notes were taken at all meetings and were completed with more reflective notes soon after meetings (See *Appendix C* for samples of these notes). Table 4-6 below lists all data gathering events using this observation method. As seen be seen here, each event is given an identifying code (e.g. HLm1).

Table 4-6 Meetings attended and observed in Holyland study

Meeting no.	*date event*	*identifier*	*description*
1	10.03.16	HLm1	Roma Awareness Training
2	26.04.16	HLm2	closed PACT meeting
3	10.05.16	HLm3	Holyland Resident Association meeting
4	12.05.16	HLm4	Muslim awareness training
5	24.05.16	HLm5	public PACT meeting
6	27.09.16	HLm6	closed PACT meeting

The formal interviews were given a identifying code HL#. A total of seven semi-structured interviews were conducted. Table 4-7 below lists these along with a description of participants to the extent that it relates to the relevance of their inclusion in the study. Confidentiality has been maintained where requested. In some case, individuals acting on official roles have purposely identified themselves while being audio-recorded.

Table 4-7 List of interview participants in Holyland study

Interview number	*date*	*Participant identifier*	*Description of participant*
1	20.06.16	HL1	BCC community safety officer
2	22.06.16	HL2	Community worker with minority groups
3	01.07.16	HL3	Resident – NIHE tenant and mother of young children
4	01.07.16	HL4	Resident – Rugby Road residents association
5	01.11.16	HL5	Ulster University Students Union Belfast representative
6	03.11.16	HL6	QUB community relations manager
7	23.11.16	HL7	South Belfast Green Party MLA

Table 4-8 lists informal interviews conducted that helped shape an understanding of spatial, cultural and social issues in the area. In the case of the Ulster University Community Relations Officer, she was consulted several times in addition to the listed meetings here. These interviews are given the reference (HLi#).

Table 4-8 Informal interviews with stakeholders in Holyland study

Interview number	*date*	*interview identifier*	*Description*
1	13.02.16	HLi1	Chairperson of College Park Avenue Residents Association (CPARA). This meeting included a site visit of Wildflower Alley.
2	10.03.16	HLi2	Spokesperson for RRCANI
3	20.04.16	HLi3	Ulster University Community Relations Officer
4	10.05.16	HLi4	Chair of Holyland Resident Association
5	06.05.16	HLi5	Ulster University Community Relations Officer
6	21.05.16	HLi6	Spokesperson for Muslim Family Association Northern Ireland (MFANI)

4.3.2.2 Interview Schedules

A unique interview schedule (see *Appendix A.4* for an example) was drafted prior to each interview which considered the individual participant and their relevance to the study. In this way, each interview could be designed to have different focuses and tones, and also to reflect on the accumulating data. Whether a participant was a resident of the area was a key distinguishing characteristic among participants. Those interviews with residents would have a more conversational tone and the structure was more fluid to maintain a flow from one topic to the next. Interviews with non-resident individuals who were accustomed to representing the position of an organisation or group were addressed in a more formal manner, and the interview schedules for these reflected this.

All interviews began with an introduction which was structure thus:

- Explain the purpose of the study
- Inform participant of schedule to be followed and ensure participant is aware of their right to take a break
- Review confidentiality

- Give the participant the opportunity to ask any questions they may have
- Sign consent form

The participant was invited to introduce themselves and their involvement in the Holyland. Generally, the following questions were asked, and in some cases, more questions were posed to elaborate on the role:

What is your involvement in the Holyland? How long for, in what capacity?

In your opinion, what are the key consequences of conflict / divisions / tensions between people who live in the Holyland?

The key concepts around which the main body of the interview addressed evolved directly from the thesis research question. They are the following:

- decision making
- information
- mapping
- emotion
- engagement

Participants were asked for their perception of the interrelationship between these concepts. The following three topics illustrate the overlaying of emotion, mapping and information on decision-making, engagement, contest and perception.

- Perceptions of contest: issues and emotional impact
- Decision making: the information, mapped information and emotion that influence this
- Engagement: the information, mapped information and emotion that influence and inform this.

4.3.2.3 Sampling

The sample of participants in this study represents a cross-section of Holyland stakeholders; from those who live there permanently to those who work with marginal communities, public and private enterprises. The sampling can be seen as operating at two levels The first is "purposeful theoretical" in that the author sought to gather a variety of voices in order to explore a breadth of phenomena (purposeful), however the choice of next participant was influenced by the data already gathered (theoretical). The second level is "opportunistic" (Coyne, 1997) or "convenience" sampling, by which means participants are selected based on such criteria as "easily accessibility, geographical proximity, availability at a given time, or the willingness to participate" (Etikan, 2016, p.2). In the case of this study, an additional criteria was the author's access via university and personal networks as well as introductions made in the course of public and official meetings. Such opportunistic sampling is at risk of containing bias and so the selection is not considered representative of the group per say e.g. an individual resident interviewed may not represent the resident perspective at large. In this case of residents therefore a number of them from different demographics and parts of the area were interviewed. Elsewhere though, actual spokespeople - such as the Student Representative identified as HL5 - were sought out and interviewed.

4.3.2.4 Recruitment

Recruitment for this study was enabled greatly by the Ulster University Community Relations Co-ordinator. This officer is a member of PACT and works with Holyland stakeholders on a regular basis. She is involved in student disciplinary procedures in the University also. Her knowledge of the issues and people in the area was

invaluable.

Making first contact with participants was done by a variety of means. In some cases, individuals were approached at public meetings and given information about the project and invited to contribute. In these cases, their contact details were taken. In other cases, where contact details were available through organisations' websites, individuals were emailed or called via telephone and invited. Several participants were recruited through the author's own personal networks, e.g. friends of friends who held relevant stakeholder positions. None of the participants recruited personally had any dependent relationship to the researcher as per the University ethics standards.

Second contact was made either by follow-up email, telephone communication or at interview stage, when the Information for Participants document was reviewed prior to the commencement of the interview.

4.3.2.5 Mappings

As in the studies discussed in the previous chapter, a variety of blank maps at different scales and graphic quality were used in the data gathering process. The images in Figure 4-23 below are two examples of the paper maps used in interviews.

Figure 4-23 Scans of working maps in Holyland study

4.4 Study 3 - Reflective study

The final study in this research was carried out to address the first part of Objective 4, **assessing quality, fit and possibilities of the mapped and discursive outputs in decision making**. This study sought to provide pragmatic validity to the methodology by asserting real-life applicability. As such there is no geographic context to this study; policy making as understood here effects all locations within Northern Ireland. Data was gathered by interview. Mapping/GIS consultants and officials employed by public organisations who make and/or inform policy and decisions on the built environment were interviewed on their impressions of how the findings of the previous studies might play a part in informing future decisions.

4.4.1 Background to the Reflective Study

The geographical context for this research - Northern Ireland - offers unique sites of contest in which to reflect on the ways in which conflict shapes space and how contested spaces shape people's lives. Planning policies here have been traditionally 'colour-blind' in relation to ethno-national identity (Gaffikin et al., 2008) as a means to maintain political neutrality in the planning system. The resulting policies and strategies for areas of ethno-national contest have been minimal as a result (Bollens, 1999), which is not surprising given the cultural, social and political tension in these marginal areas. What is emerging however is an understanding of just how politically charged the consequence of this lack of policy really is. While equal services might be provided on both sides of a divide, that does not insure an equitable share of resources, due to imbalances in need. The example of the imbalance in housing demand mentioned in *1.2.4 Decision making* on page

8 illustrates this well. Other issues such as poverty, social deprivation, local educational attainment, weak infrastructure and issues affecting young people (Northern Ireland Executive, 2013) are also prevalent and have come to bear on quality of life in interface communities.

The transfer of planning powers to local councils as a result of the Review of Public Administration (RPA, 2005) created an opportunity to implement community planning across all council districts. Community planning is a process by which the council and its partners identify long-term objectives for improving social, economic and environmental well-being at a district level and and contributing to the achievement of sustainable development in Northern Ireland and to identify actions to be performed and functions to be exercised for the purpose of meeting these objectives (Local Government Act (NI) 2014). It is in this emerging context of engaged, multi-disciplinary governance that this thesis seeks to present a new way of creating knowledge about contested spaces in Northern Ireland which might inspire councils in new ways to perform actions and exercise functions that would lead to the improvement of local social, economic and environmental well-being.

4.4.2 Methodological procedures in Reflective Studypact

A total of nine individuals were interviewed, as listed in Table 4-9. Information sheets (see *Appendix A.3)* containing some background to the thesis as well as an idea of what the interview would be like was distributed at the time of recruitment via email, and formal information sheets as consent forms were shown and signed at the interview event.

Table 4-9 List of interview participants

date	*Organisation*	*Department*	*Role*	*ID*
03.02.17	BCC	Planning and Place	Director	R01
09.02.17	NIHE		Interim Chair	R02
15.02.17	NIHE	Landlord Services	Director	R03
16.02.17	DfI	Planning Policy	Director	R04
22.02.17	NIHE	Community Cohesion	Project Officer	R05
15.03.17	DfC	Housing - TBUC	Manager	R06
15.03.17	DfC	Housing - TBUC	GIS Consultant	R07
15.03.17	LPS	GI Development	Account Manager	R08
25.04.17	NIE	Executive Office	Good Relations Manager	R09

Interview schedules were drawn up (see *Appendix A.5),* that focused on mapped and 'emotional' aspects of decision making as well as the readability/quality of the maps. The key question in all interviews was the usefulness of the emotional mapping process and/or outputs in aiding decision making in the built environment in contested spaces in Belfast.

A large number of printed maps and other visual materials were brought to each interview (see Figure 4-24 for thumbnails of graphics used).

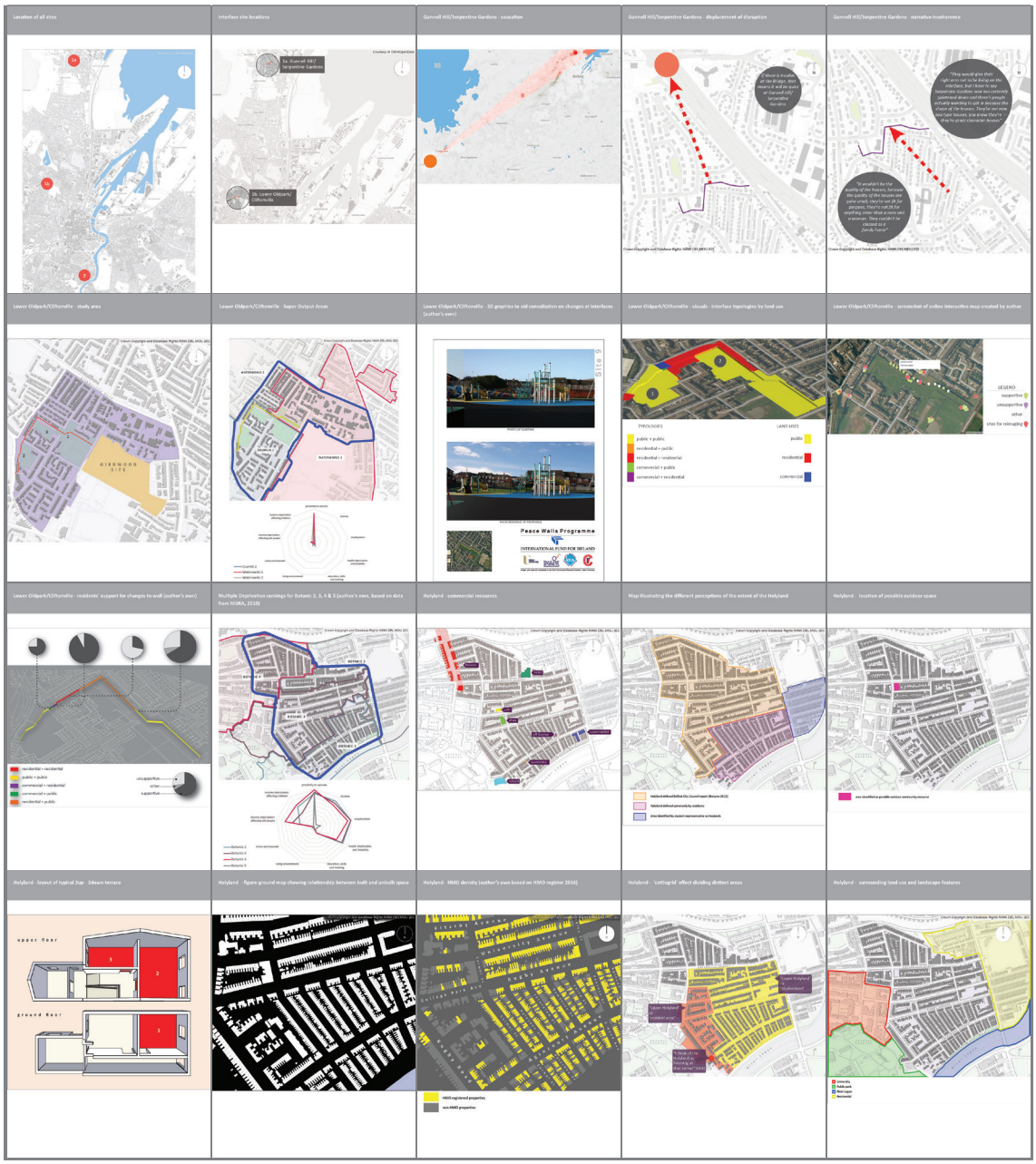


Figure 4-24 Thumbnail views of selected maps used in interviews (author's own)

Not all of the materials illustrated above were used in all interviews. The direction and scope of interview was dependent to a degree on the particular roles and expertise of the participants and also time restrictions, as all interviews were conducted during office hours. In some interviews, a brief, chronological history was told of the test studies. In others, a decision was made on which maps were likely to stimulate the

most discussion and these were shown at the outset. As data accrued, it became clear that some of the graphics were of more interest to participants than others. These were then identified as more relevant and were shown earlier in subsequent interviews to verify significance, and interpretative and theoretical validity.

4.5 Conclusion

Belfast is a deeply divided city in sovereign, religious, ethnic and social terms. The study sites identified here have different types of contest, as well as other geographic, and cultural characteristics, offering the opportunity to see how SpatialGT performed under a variety of conditions. The wide range of decision making stakeholders included in the reflective study provided a spectrum of possibilities for interpretation and application of outputs.

While the studies do not seek to construct generalisable knowledge that might be applied universally to all contested spaces, the findings offer some insights that can inform future engagement with these particular communities and others that share similarities. Each interface has its own history of loss, pain, violence and urban rift. And not all sites of ethno-national clash are so clearly marked with barriers.

It is unclear if the future holds further increases in migrant and refugee numbers, due to Brexit and the yet-undecided state of UK immigration and non-UK nationals currently here. What is clear is that racial bigotry is expressed more openly now and this will have an impact on all of society.

The changes to the city due to the relocation of Ulster University Jordanstown campus to Belfast city centre will have a profound effect on the urban fabric as

well as existing student communities. Already, large portions of historic streets have been demolished to make way for the university buildings and associated speculative housing and service provision (see Figure 4-25).

Figure 4-25 Demolition of historic city centre buildings to make way for student services (leslie, 2017)

The following chapters look at different sites of contest around territoriality, sovereignty, lifestyle clash and ethnicity in an attempt to map the emotionality of these places.

Chapter 5 SpatialGT in Cases of Ethno-national Contested Space

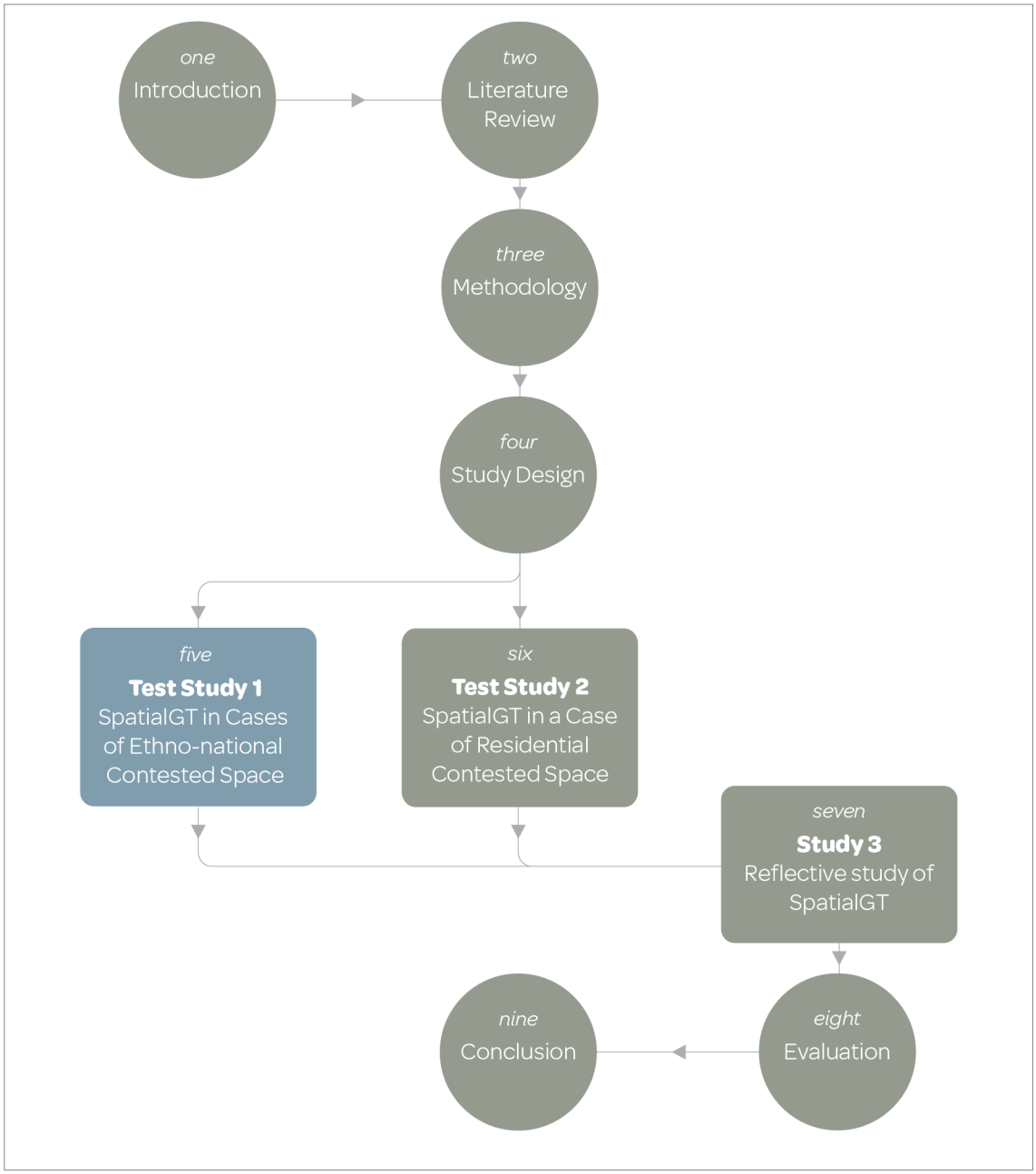


Figure 5-1 Diagram showing all thesis chapters (v)

5.1 Introduction

This chapter (see Figure 5-1) focuses on the studies conducted in spaces of ethno-

national contest, specifically, interface areas. Jarman's (2004) working definition of interfaces as "the intersection of segregated and polarised working class residential zones, in areas with a strong link between territory and ethno-political identity" (p.5) suffices here to set the scene for this typology of contested space while also highlighting the key social and spatial preoccupations of study in these areas.

It is the first of three "study" chapters which contain the analysis and findings of the three studies conducted. This chapter concludes with a reflection on the implications of conducting SpatialGT in spaces of ethno-national contest.

Testing of SpatialGT in ethno-national space was carried out at two separate interface locations in Belfast, Northern Ireland. Both locations have interface barriers, or peace walls separating predominantly PUL and CNR communities. Data was gathered from residents and community organisation representatives. The studies were carried out consecutively, with some changes made to data collection methods. In both cases, contact with residents was managed by community representatives.

The author saw an opportunity to build on relationships developed in the course of university research she carried out in her role as research assistant. Between October 2013 and June 2015, the author was engaged in two research projects for Ulster University; *Re-imaging the Greater Whitewell Community* and *Re-imaging the Peace Walls (at Lower Oldpark/Cliftonville).* The extent of the required work was graphic in both cases. 3D renders and photo-montages were created for the respective community organisations to assist in their efforts to establish consent for changes to the peace walls. Where the Re-imaging projects stopped and where the author's work began was when the graphics were handed over and the research project ended. The author's continued work presented here on Lower Oldpark/

Cliftonville community support for changes in the photo-montages is not part of the original re-imaging but constitutes original, independent work.

The Northern Ireland Executive committed to actively seek local agreement to reduce the number of peace walls (Northern Ireland Executive, 2012, p10) and aspires to remove all peace walls by 2023. The inclusion of the caveat of "local agreement" in this commitment is a very important one, as it requires the engagement of local people. This caveat makes explicit the importance of community support in the future sustainability of the areas if such changes to the built environment were to take place.

5.1.1 The past and present of life at interfaces

The accounts gathered and analysed here refer to historic and contemporary experiences of living close to these interfaces. As can be seen in the analysis below, themes arising from the studies are interwoven in time and space. Emotion and identity in relation to location cannot be delineated into a neat time line as personal and collective memory and lived experience accumulate over time to construct the multiple narratives. Historic and contemporary events can therefore both contribute to the shaping of prevailing versions of reality. As a rough guide to orientate the reader through the following findings then, in the case of Gunnell Hill/Serpentine Gardens, sectarian violence and anti-social behaviour along the actual structure has largely dissipated, or relocated to other interfaces or hotspots nearby. In the case of Cliftonville/Lower Oldpark, the accounts gathered were not sufficiently in-depth or qualitative to distinguish the events or time period that they related to. Instead, they should be read as cumulative, enduring narratives shared by the research sample from a homogeneous PUL community.

5.2 Gunnell Hill/Serpentine Gardens peace wall

The first area of study is in a neighbourhood known at Greater Whitewell which lies north of Belfast (see Figure 5-2 below). The peace wall here separates homes of PUL to the north and CNR residents to the south. The wall delineates the southern boundary of an area known as White City, approximately three hundred homes occupied exclusively by PUL-identified residents. Immediately east of the area is the main Whitewell Road which serves a large residential area.

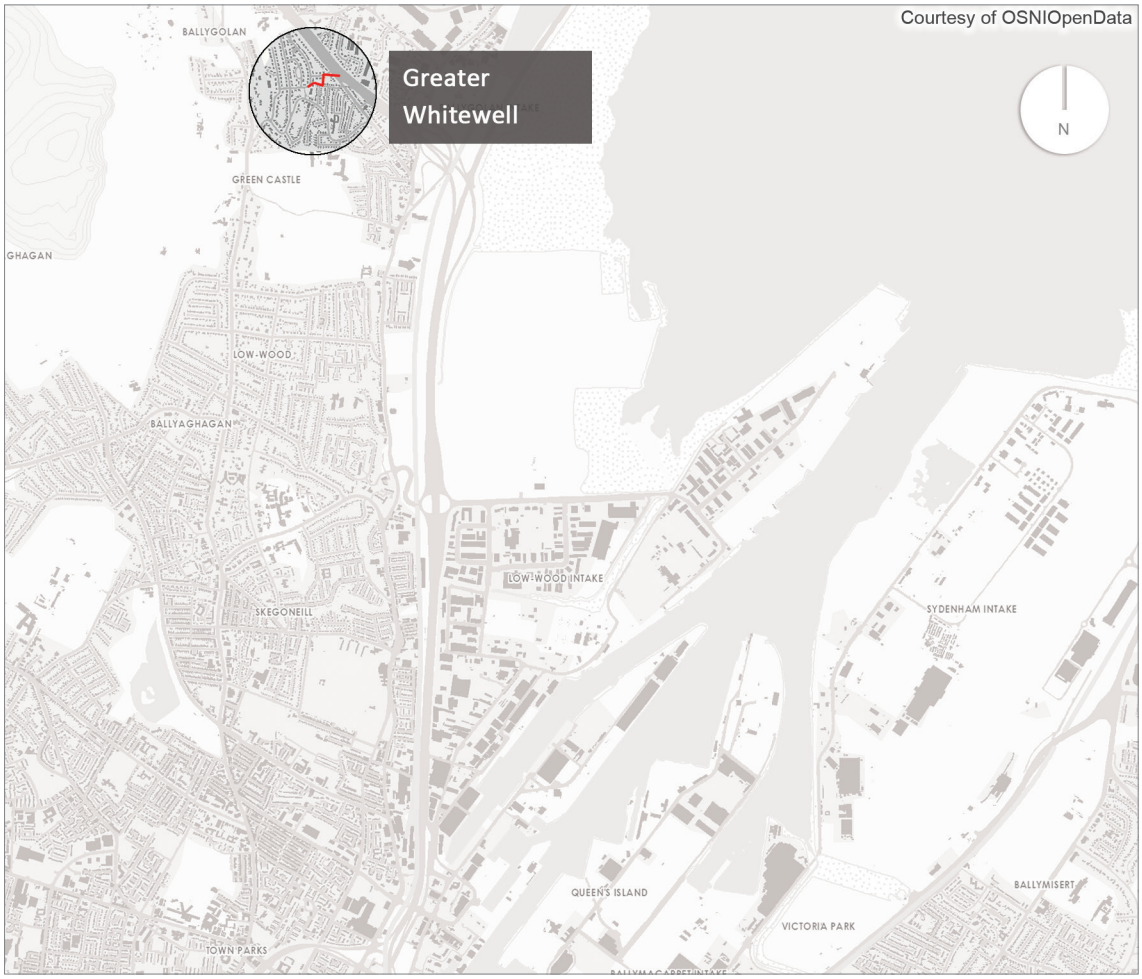


Figure 5-2 Map of Belfast showing location of Gunnell Hill peace wall

The structure is a 3 metre high metal-clad fence with 6 metre high mesh fencing on top (see photos in Figure 5-3) running for 206 metres from Gunnell Hill to

Serpentine Road at the rear of properties in Serpentine Gardens (Belfast Interface Project, 2014).

Figure 5-3 Photographs of interface barrier from Serpentine Gardens and Gunnell Hill respectively (author's own)

The Gunnell Hill/Serpentine Gardens peace wall was erected in 1999, and the commonly held understanding for this was as a response to escalating, prolonged and intense sectarian violence that was prompted by the Drumcree Orange Order parade standoff in 1997 (CIAN, 2013). It is thought to be one of the only peace lines ever erected in an historically middle-class area but by 2012, the area was among the top 10% of the most socially and economically deprived electoral wards in Northern Ireland (Byrne et al., 2012). This statistic echoes anecdotal reports that the area - like other interface communities - is "left behind" with regards to government and commercial investment and development. The immediate impact of sectarian disruption on the built environment and housing patterns seen in Greater Whitewell was the damage and subsequent abandonment of owner-occupied homes along the interface. Long-term residents left their homes and sold them.

This was for a variety of reasons, which include the escalating risk of harm due to regular rioting, the increased building repair bills and insurance premiums. Many of the homes were sold to the Scheme for the Purchase of Evacuated Dwellings (SPED) which is a scheme run by the NIHE. These dwellings were subsequently let to residents who were not necessarily from the traditional Greater Whitewell communities. This has been seen by long-term residents as detrimental to the social cohesion of the close-knit communities. Some incoming residents are not sensitive to the volatile sectarian atmosphere and their behaviours - such as flying national flags - have provoked hostilities (this is based on interviews conducted in this study). There is also a perception that historically, some of those housed in these interface rental properties have been moved from areas worse affected by sectarianism, and this has brought other Troubles-related social and economic challenges into the area also. The impact of this kind of social fracturing occurring along many interfaces is less measured, recorded or studied in academic literature on the legacy of the Troubles. Indeed, even in this study which actively sought out multiple voices and perspectives in relation to lived experiences along the interface encountered significant obstacles to accessing participants who were not long-term residents. A dominant narrative existed that held that those who had moved to the area more recently did not really "know" the area and the issues, and therefore their contribution to the study was not relevant. The selective identification of residents based on the perceived value of their experiences for inclusion in the study became a key weakness in the recruitment of the study, discussed in more detail later in this chapter.

5.2.1 Interface typologies

Figure 5-4 illustrates a spatial analysis of the interface (conducted in the course of this study) in which interface typologies based on adjacent land use is generated.

Figure 5-4 Interface typologies based on adjacent land use at Gunnell Hill/Serpentine Gardens, author's own (base map courtesy OSM)

As can be seen from this image, the majority of this structure separates residential land, with the exception of a portion that runs alongside a community centre on the White City side. Here, it is coloured orange to reflect the combination of red for residential and yellow for public. This typological coding visually communicates the residential nature of the interface and might offer a powerful tool to compare it with other interfaces in the area or indeed across the city. There was not scope in this study to construct other typological analyses other than for the interface in test study 1b, which is discussed later.

Community representatives who took part or supported this study are considered to be 'experts', with unique knowledge of the subject matter or, as is this case, the study sample. These experts were identified by their unique role in overseeing all aspects of community development in the area and in particular, engaging the local residents. Each of the three experts to this study have over ten years' experience working in community development in this study area and have strong working relationships with residents, local authorities and other stakeholders, businesses and other community groups active in the area such as youth organisations and women's groups. One of the experts is from the PUL side of the community and the other two identify as CNR. Their immediate and extended families and social networks exist in the areas associated with their respective ethno-national identities. On the basis of the Parallel Process Approach discussed previously, a data gathering process which sought to bring together participants from both sides was deemed inappropriate from the outset. Instead, the experts agreed to help engage their respective communities separately, in parallel. Data gathering was planned to happen in two separate locations; a community centre in the PUL - identified area adjacent to the interface and the community organisation's offices on a nearby main road. The perception of these offices as associated with the CNR identity meant it was not perceived as a neutral, safe space for PUL participants to gather. Different engagement strategies were identified by the experts that were considered suitable for their communities; for the PUL side, a group 'information session' was organised, were the author could be introduced, the project information could be shared and potential participants could ask questions and voice concerns.

The highly specialised knowledge and close relationships of these "experts" involved

in recruitment and data gathering was on the one hand sought in the absence of the research team's own experience and relationships in the area. The involvement of such participants with authority is welcome in qualitative research where knowledge is emerging and not imposed. However, there are implications for the role of the researcher. By giving authority to voices within the research study, the researcher can experience a lack of control or autonomy (Råheim et al., 2016). The impact of the dominance of these experts in the research process became apparent during the course of these studies.

5.2.2 Findings

The following themes emerged from the data gathered:

- Interfaces are interconnected
- Interface as a destination
- Narrative incoherence: acceptable and unacceptable stories
- Invisible interfaces

5.2.2.1 Interfaces are interconnected

This theme emerged due to the recurrence of statements made by participants in interviews and by experts in meetings that suggested an interrelationship between anti-social and sectarian activity at interfaces and other areas. As illustrated in Figure 5-5, rioting at a nearby interface known as Arthur Bridge on a given evening was seen to be a sign that there would be no trouble at Gunnell Hill.

> *That's great, this is happening at the bridge, it's not happening down at Gunnell Hill/Serpentine Gardens (Participant GH1, 2014)*

Participants referred the use of car horns within White City to alert residents to rioting at different 'hotspots' over the course of a given evening. One participant

joked, "that's why we are in such good shape, we had to run from one to the other" (Participant GH2, 2014).

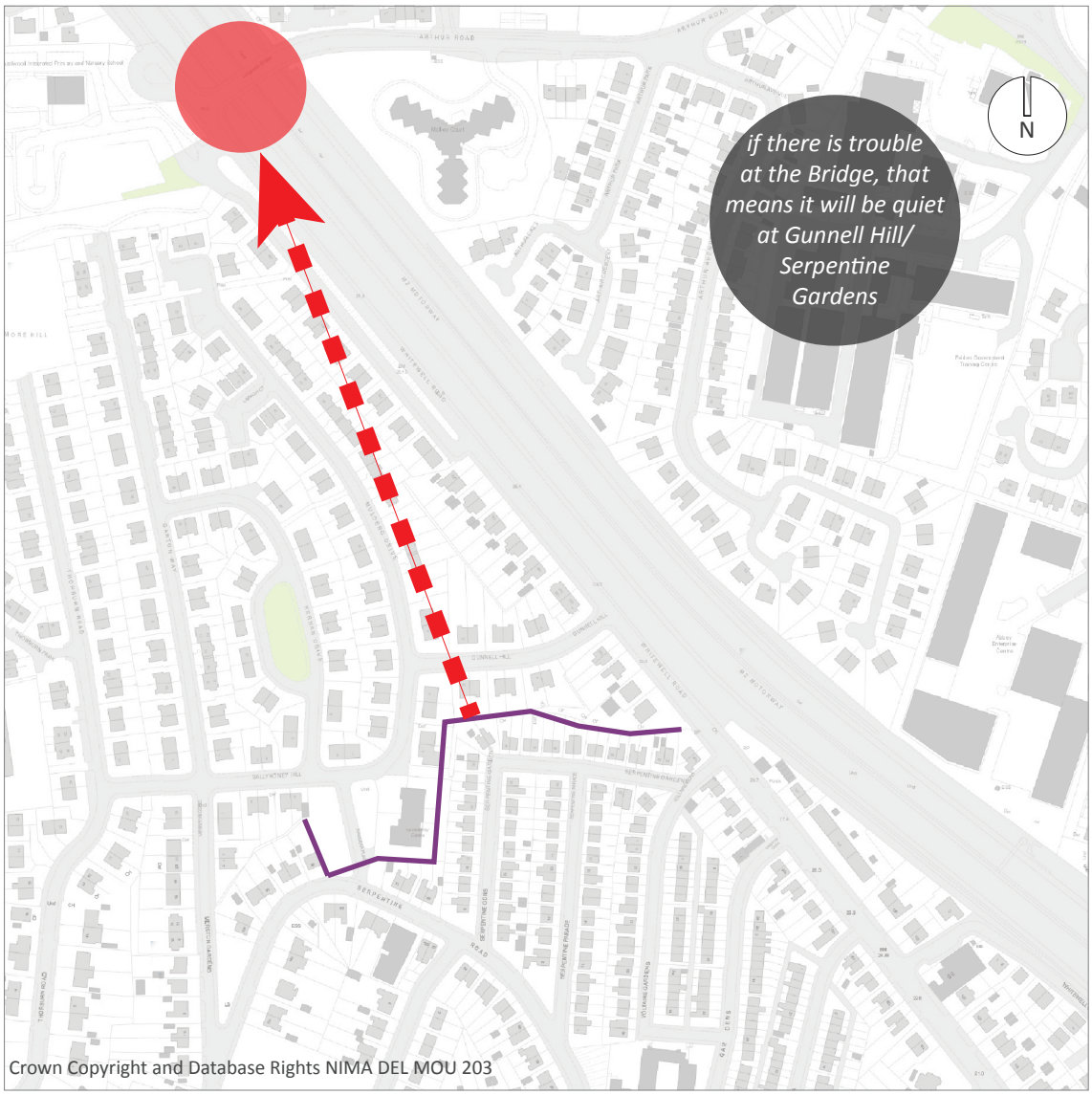


Figure 5-5 Map (nts) illustrating the perceived interconnectedness of behaviours at interfaces

5.2.2.2 Interface as a destination

Additionally, a relationship between the street pattern and the location of the Gunnell Hill/Serpentine Gardens was highlighted (see Figure 5-6 for mapping).

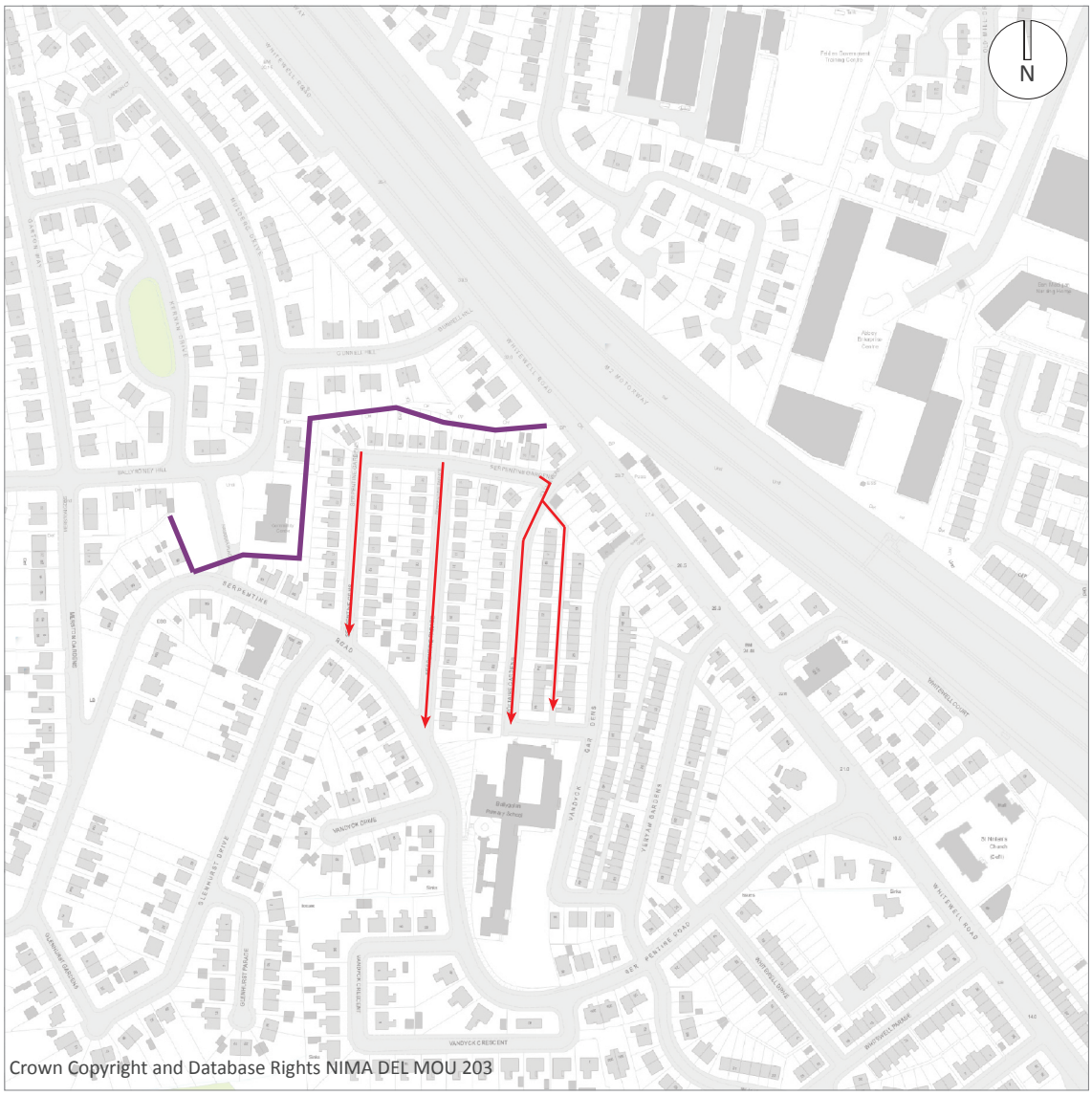


Figure 5-6 Escape routes from interface on Serpentine Gardens side

It was reported that the network of streets on the south side in the CNR Serpentine area provided safe escape for those individuals who come and go to interface for the purposes of rioting and throwing missiles. (It should be noted here that experts were keen to stress that violence was not initiated or maintained by residents of the houses at the interfaces). The escape route through these streets and alleys is a more protected one than the main Whitewell Road which is more public and exposed.

It's just it was geographically near. It was because it was an interface. It

> *was back garden to back garden. It was handier []it's close access. And close access to get away as well because you've got three different areas to get away you would have went through the Parade, Serpentine Gardens, right down to even Voltaire, Whitewell Road. So it was more of an easier target. (Participant GH2, 2015)*

This map was co-produced in a focus group with community experts who identify with the CNR community to the south of the wall.

5.2.2.3 Narrative incoherence: acceptable and unacceptable versions

This theme relates to the sometimes conflicting accounts given by different participants, and in some cases by the same participant in different contexts. Coherence of narrative is a psychological measure of a person's capacity to form a consistent autobiography (Buck et al., 2007). Incoherence is linked to trauma. In the case of this study, the theme Narrative Incoherence refers not to any particular individual's conflicting account but to that of interface community as a whole, whereby numerous versions of the truth can co-exist. What became apparent in the course of analysis was that stories were adapted to respond to the listener - that is - to other people present in focus groups and the perceived audience. Two examples are given here to illustrate the construction of this theme. The first example is illustrated in Figure 5-7. Two statements made by the same participant in different settings are in stark contrast to each other .The first statement, "*They would give their right arm...*" was made by the participant in a one-on-one interview. Note the red line indicates the desired movement within the area to Serpentine Gardens suggested in the statement in the top right hand circle.

Figure 5-7 Conflicting narratives from the same participant in different data gathering contexts.

This first statement (top right) appeared to have significance for the built environment in that the housing layouts of the properties on Serpentine Gardens seemed to go some way to mediating the undesirability due to their proximity to the interface and the associated risks of harm. The implication that good design and fitness for purpose could ameliorate fear or perception of risk was an exciting prospect. As such, this statement was added to a working map along with the arrow to denote the

perceived desired movement to Serpentine Gardens as described in the interview. The interim working map was shown to the participant and other members of a subsequent focus group as a member checking exercise to test interpretative validity of the map. The second, contradictory statement - "*It wouldn't be the quality of the houses*..." was then made by the same participant.

Whereas the initial interpretation was about architectural design and fitness for purpose, a second layer of meaning was supplanted by this contradictory account, transforming the focus of the interpretation. This was no longer about Serpentine Gardens but about housing provision in the Nationalist Whitewell area. While the nuanced preferences for types of housing could be discussed in more private setting, the 'public' message was that housing supply does not meet demand, and in the context of the focus group, this was the acceptable narrative.

The second instance of this shifting meaning relates to the working map in Figure 5-8. During a focus group when residents and a community representative were present, the expression "eye of the bullseye" was used to describe White City. When asked to clarify, the participants explained that because White City was a PUL enclave surrounded by CNR-identified communities, it was a target for sectarian violence.

Figure 5-8 White City as "Eye of the bulls-eye"

This was member-checked a number of times during the session. Additionally, afterwards as the author was writing up notes she double-checked with the community expert if they thought that using this word in the analysis might be breaking confidentiality, or might be too provocative. They assured the author that this expression had been used not only by residents among each other but was part of a lexicon used when describing the area in formal documentation such as fund-raising applications. The working map was duly drawn and was brought to a

subsequent focus group where only community representatives were present. The map was shown to the group. A long, tense discussion ensued.

Participant GH2, who was present in the previous focus group and who had confirmed the general usage of the term, insisted that the reference to the bulls-eye was:

> *not the sense of being a bulls eye for targeting. []it was being like, the centre of the bulls-eye of the board but to come out of White City you were going to have to go through you know Lower Whitewell or Longlands (Participant GH2, 2015)*

The discussion among the representatives, or experts, (see *Appendix C.1* for relevant extract from transcription) at this stage focussed on the usage and meaning of this term. It was acknowledged by participants that the term 'bulls-eye' can mean a target, but it was also accepted that in this instance, a different meaning was implied.

It is impossible to separate the meaning of a bulls-eye from a sense of targeting in any real sense in a violently contested area such as White City and Lower Whitewell, as described by a Participant GH3 at the conclusion of this section of the focus group:

> *That worked on both sides, in all honesty, because if you look at the Lower Whitewell as well we have to go through any areas as well. No matter where we went, if we had went into town, we'd to go right past Mount Vernon, Shore Crescent, all those places. So we had no freedom of movement either (Participant GH3, 2015)*

Both sides of the community are regularly the targets of physical attacks, but to claim overtly that your area is a target implies that someone else is targeting you which is an accusation of sorts. What is most interesting about this exchange however is that the use of the term 'bulls-eye' and even its graphical depiction was overlaid

with an entirely different meaning, which appeared to have more to do with the geometry of a dartboard resembling the geometry of White City being surrounded on all sides by nationalist areas. When this was explained, there was an unspoken understanding of the significance of this spatial relationship and its connection with the imagery of the bulls-eye. There was an eagerness on the part of the experts to resolve the misunderstanding quickly as if it was unhelpful to them as collective unit. As an exchange between individuals from different sides of the community, it demonstrated a sophisticated ability and willingness to resolve conflict. There was however, a rewriting of meaning required for this resolution to take place, which demonstrates the necessity for these multiple stories, or versions.

As to the value of mapping these conflicting narratives, one expert claimed that mapping could act as a record of opinions, and by repeating the mapping process in the future, a measure of progress could be made.

> *but surely for us that are going into this type of programme, that works well for us because we can say, "This is what this was. Now, look at us now". That's how we can measure. You can ask people, how they feel, does that still, does that target still apply to them all, do you still feel that that's the case now. You know I think it - I think it's quite a positive (Participant GH1, 2015)*

5.2.2.4 Invisible interfaces

This theme emerged from data about geographic locations recognised but not clearly marked as interfaces but at which there was threat or violence. Figure 5-10 identifies a number of 'flashpoints' on the periphery of White City which were marked onto blank maps by participants (see Figure 5-9 below for scan of paper working map).

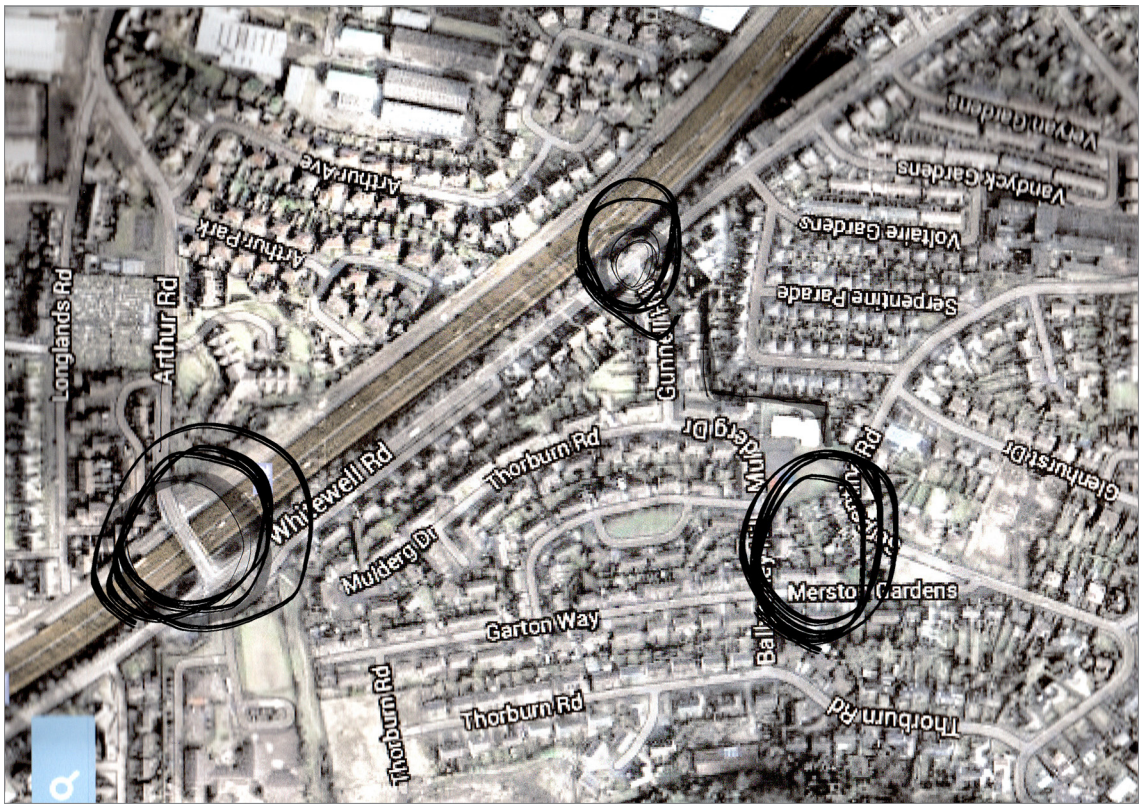


Figure 5-9 Scan of working map showing location of known "hotspots"

These locations represent points of physical contact between rival groups who would regularly come together to riot at the present time.

Figure 5-10 Invisible interfaces - 'hotspots', 'flash points' Locations of interface violence not marked by barriers.

Figure 5-11 shows a more subtle form of segregation than an interface, whereby two bus stops for the same bus route are located within 300 metres of each other along the main Whitewell Road. The one marked in orange is used by the PUL bus users coming to and going from White City, and the green by CNR bus users accessing Serpentine Gardens and the nearby nationalist areas. The second bus stop was introduced as a safety measure when the original, mixed bus stop became a flash point. The distance between these two stops is approximately 125m, which is well below the guide distance of 250-300 metres (Roads Service, 2005, p.68).

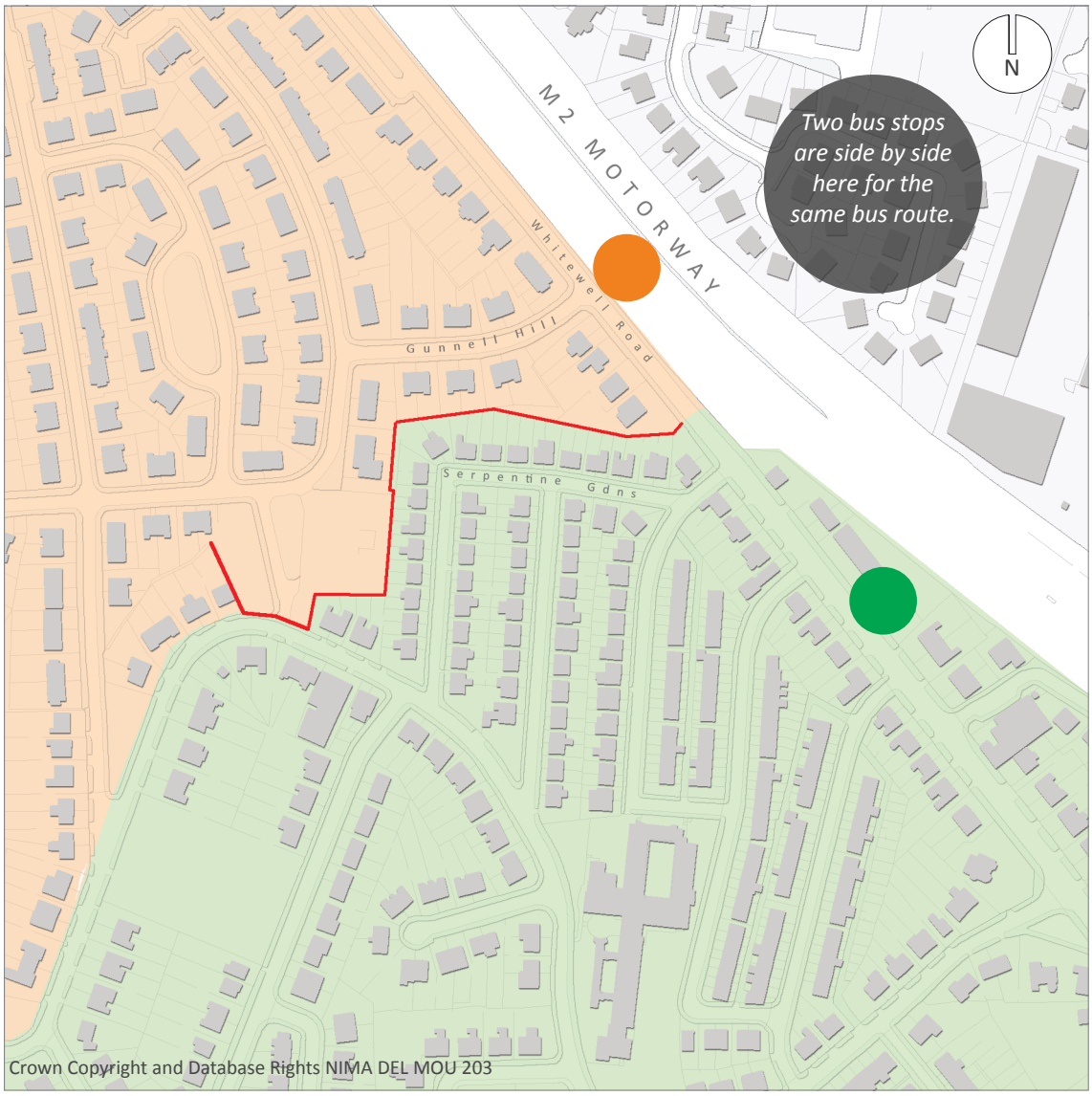


Figure 5-11 Separate bus stops for PUL and CNR users

The demarcation of these more subtle elements - invisible interfaces, flashpoints and segregation features - combine with the coordinates of interface structure to paint a more detailed picture of the visible and invisible boundaries between two neighbouring sides of the community, and go some way to explaining how they are reinforced. Accounts of the disturbance and rioting that oscillates between a number of corners of White City demonstrated a unified sense of threat, one that was articulated through the use of car horns as mentioned above, and the travelling

of residents from one location to another in defence of a homogeneous community under threat.

5.2.3 Ending the study

In June 2015, GWCS informed the author and supervisor that they would not support further data gathering. They said that they did not have funds to support participants emotionally or psychologically, should they have adverse experiences as a result of the research. GWCS were not obliged or expected to provide professional support in-house as they were a community organisation and not a specialist care organisation, and they had previously agreed to sign post participants to suitable support should they need it. In the "What if something goes wrong?" section on the Information for Participants documents (see *Appendix A.1*) distributed to all participants, it was stated that "…in the event that individuals seek help or support after the study, details of local support organisations will be provided by GWCS."

There are several dedicated services in Belfast for individuals who have suffered troubles-related trauma including Wave Trauma Centre, The Bridge of Hope, EHSSB Family Trauma Centre and Victims and Survivors Service, as well as a raft of general support services. The recommendation of suitable support for any individual was left to GWCS, as the author was not as familiar with the support providers and any social, geographic, ethno-national or other obstacles that might exist for participants to access any particular service. There had never been an expectation that GWCS were to provide support, but they terminated the study over this issue after a resident who participated in the study approached them and told them that participating in the study had 'brought up' distress associated with past events that were discussed in the focus group. This participant had mentioned

several times during the focus group, the death of someone whom they knew personally (possibly related). Based on the details given, the author concluded that this death was of a PUL young person which was caused by a member of the CNR community. This death and the subsequent legal process was clearly traumatic for the family and the whole PUL community in Whitewell.

Literature drawing on trauma-focussed research in areas such as natural disaster, terrorist attacks and many types of childhood, adolescent and adult abuse makes a clear and significant distinction between trauma and any distress experienced afterwards in a research context (Legerski and Bunnell, 2010). The term 'retraumatisation'' in the research context is problematic in that it has no fixed definition. In some work, retraumatisation means the repetition of a traumatic event (for example, another car accident or another bereavement). In others, it refers to 'triggers' and 'flashbacks' (Courtois and Courtois-Riley, 1992) that remind the individual of the event or significant details of it. While the focus group clearly did not pose a threat to or re-victimise participants, distress was experienced by this individual as a result of talking about events in the past and it was to a degree that the participant brought it up with GWCS. Under these circumstances, the organisation's concern for future research participants is understandable. Discussing past trauma was not the primary driver of the data collection process and the topic guide did not specifically seek to gather trauma stories. However, research of emotion in spaces of ethno-national contest in Northern Ireland that have seen intense, enduring sectarian violence will inevitably unearth memories of traumatic experiences. Just like the memorial quality of the structures themselves, engagement in peace wall consultations is likely to carry the mantle of remembrance.

There will always be a risk in any research of adverse effects. Some trauma literature suggests that "distress may be understood as an indicator of emotional involvement in the research project rather than as an indicator of harm" (Collogan et al., 2004). There is much literature discussing the longevity and intensity of research participation as well as benefits such as satisfaction. The occurrence of participant distress in the case of this study would appear to be typical. An extensive meta-analysis of research literature looking into distress in a wide range of trauma events concluded that "individuals generally find research participation to be a positive experience and do not regret participation, regardless of trauma history or PTSD" (Jaffe et al., 2015, p.40). The author did not have the opportunity to gauge regret or positivity of the participant experiences beyond the second-hand information about this one participant. It is therefore unknown if the general and longer-term experiences of participation were consistent with the existing body of trauma research.

It had been hoped that this research could have offered a safe space for participants to explore memories and lived experiences and consider how life has changed with time, supported by community representatives and group settings. There was much discussion of how life was easier, how the sound of children playing in back gardens along the interface was a welcome and nostalgic sound. It came as a surprise and a disappointment that this study should be drawn to a sudden, if delayed, conclusion. However, the well-being of participants, and their ongoing relationship with GWCS are to be respected, and the principle of nonmaleficence in research prevails. The issue of support for participants was clearly an important one for GWCS, and whilst the University was content that they could provide it by signposting, GWCS did not

feel that this was sufficient in the end.

The decision to access participants for the study through the community organisation was made early in the project. It was thought at the GWCS representatives' first-hand, personal acquaintance with residents in the area would facilitate a safe, trusting introduction to the study for residents in spaces and formats that suited them. As discussed above, issues of non-integration between the two sides of the community were also considered and as a cross-community organisation, GWCS was able to bridge and reach both sides. The hoped-for trust and safety in the study did not materialise. The author was restricted by this approach in her ability to sample and access participants directly. Lengthy discussions took place with GWCS representatives in meetings about who exactly could be interviewed and why. The main reason given for consideration of a potential participant was the individuals' lived experiences of the most difficult and traumatic times on the interface. Residents who had moved into the area since disorder and sectarianism had subsided were repeatedly excluded from consideration, despite the author suggesting numerous times that the experience of these 'new-comers' was also valid and might offer a valuable input into the project. During this study and at its conclusion, the benefits of operating solely through a community organisation began to be out-weighed by the limitations it put on the author's access to participants and narratives that might not be in line with the 'acceptable narrative' of peace-building and community cohesion. What was also rethought at the end of this study was the data gathering method, and a less directly interactive one was sought. The author decided that future data gathering would be carried out by observation thereby avoiding the possibility of causing distress by discussion. On reflection also, the community

organisation had good reason to not request the purely graphical re-imaging methodology at Gunnell Hill/Serpentine Gardens as part of the wider University Re-imaging research project. The highly sensitive nature of emotion here meant that a more inductive method was required, but perhaps for this same reason, this was not the ideal site to test a new methodology.

5.3 Lower Oldpark/Cliftonville peace wall

Given the challenges of access to participants and control over the research process at Gunnell Hill / Serpentine Gardens, a further study was sought to test emotional mapping in spaces of ethno-national contest. The second study was carried out at another interface barrier in North Belfast known as the Lower Oldpark/Cliftonville peace wall (see Figure 5-12 below). An observational data gathering method for data collection was selected for this study, which was understood to be less intrusive.

Figure 5-12 Map of Belfast showing location of Oldpark/Cliftonville interface barrier

Table 5-1 below lists all meetings and exhibitions that were observed. In addition, regular email contact was made with the relevant experts.

Table 5-1 Summary of data gathering events in Test Study 1b

Date	*Description*
22/01/2014	Initial scoping meeting with experts
27/10/2014	Meeting with experts
10/03/2015	Meeting with experts
26/08/2015	Observation at panel exhibition

This study revealed more obstacles to engagement in community consultation. The obstacles were only revealed after significant delays, and were unforeseen

by the community organisation concerned. The nature of the obstacles will be discussed below. They ultimately led to the cancellation of face-to-face community consultations. Data gathered in this study is therefore based on some preliminary consultations and a review of communications with the community organisations.

5.3.1 Interface typologies

As at the previous study site, a land use analysis was conducted and the interface was colour-coded to reflect this. As can be seen here in Figure 5-13, this interface is composed of different types of wall.

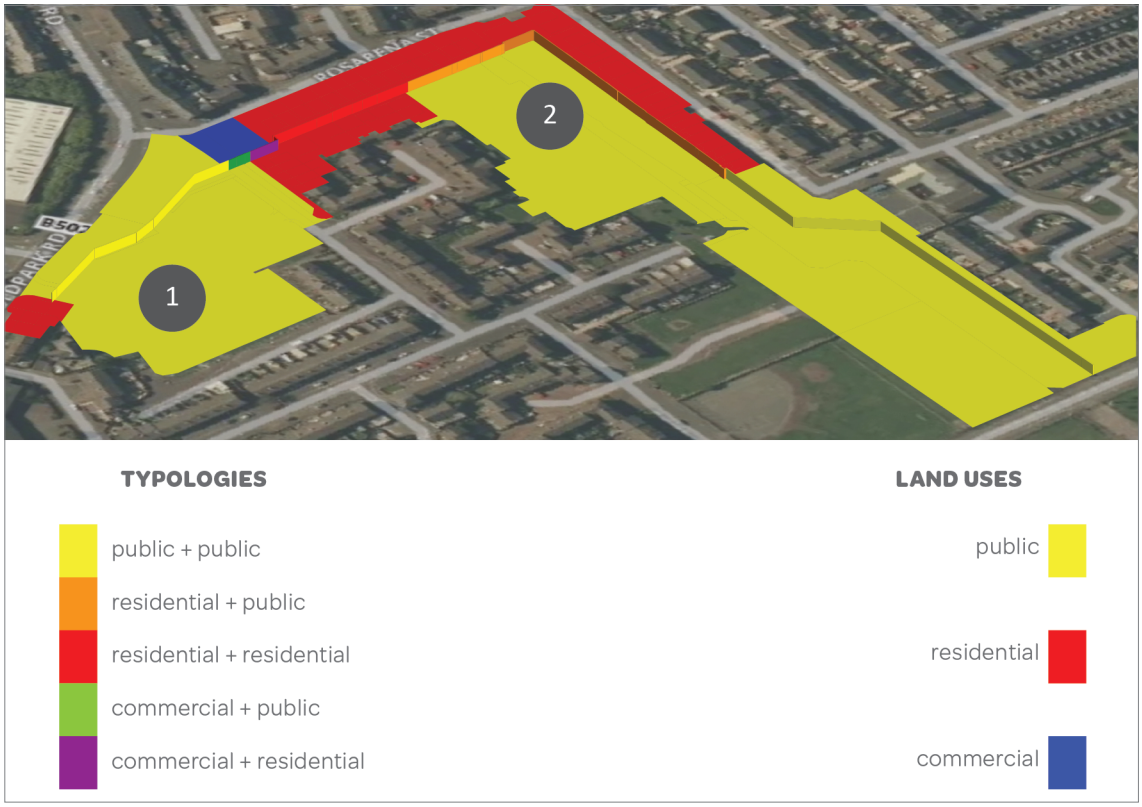


Figure 5-13 Interface typologies based on adjacent land use at Lower Oldpark/ Cliftonville (base map courtesy OSM)

This spatial analysis diagram reveals the close proximity of housing to the structure. This residential proximity was perceived by many as a factor in the unacceptability changes to the structure, as discussed below.

5.3.2 Panel design and production

In October 2014, the author was engaged in preparing 3D visuals for Lower Oldpark Community Association (LOCA) and Cliftonville Community Regeneration Forum (CCRF) relating to eight key locations along the main interface structure and other defensive structures in the area. Visuals were to illustrate 'before and after' scenarios of proposed changes to the structure such as repainting, replacement of wall with fence and the addition of play equipment. The intended use of the resulting visuals was to aid the community organisations in engaging the respective communities on either side of the wall to seek community agreement for moving forward with upgrades to the built environment, in line with the Programme for Government's commitment to "actively seek local agreement to reduce the number of peace walls" (Northern Ireland Executive, 2012, p.50). LOCA and CCRF sought such local agreement in preparation for proceeding with fundraising to carry out works. The proposals were put forward on a cross-community basis by the organisations, representing aspirations that they believed their respective communities could reasonably accept. Further community consultations were to be carried out on the basis of the parallel process approach discussed in the previous study, i.e. CCRF would consult with nationalist Cliftonville residents and LOCA would consult with unionist Lower Oldpark residents.

LOCA and CCRF commissioned 3D modelling in Sketchup (2015) with rendering as a methodology for the visuals, based on sample images shown to them before commencement of the contract. Numerous draft renders and screen captures of an extensive 3D model of the study area and interface sites were produced for approval. Such approvals were sought at these times: the exact camera 'point of view' and

scope, render quality (e.g. sketchy, photo realistic), colour choice for peace wall. Figure 5-14 below is a montage of some of the draft images, demonstrating a variety of image quality, points of view and render settings.

Figure 5-14 Montage of draft visuals sent for approval

In December 2014 following detailed 3D modelling and rendering in parallel with much email, phone and face-to-face consultation, panels for four of the eight sites were completed. At the next project meeting with LOCA and CCRF, the author was informed that the 3D modelling method was no longer what the clients wanted and that instead, a photo-montage approach was preferred. The justification for this was that the 3D renders did not look 'real' enough. From January 2015 to April 2015, a new set of visuals were created, in close consultation with LOCA and CCRF. The method used to construct the images was to photo-montage proposals onto photographs of the existing peace wall sites, thus constructing photo-montages. This work was carried out in Photoshop (Adobe® 2017c). Some elements of the montages such as fences, play park equipment and material texture, were constructed in Sketchup and imported. A1 panels layouts were formatted in Indesign (Adobe® 2017a) consisting of the original and proposed images and supporting information

such as maps and titles (see *Appendix E.2* for A4 reproductions of the panels). Web-optimised versions of the original and proposed image files were geo-located and uploaded on the online, interactive mapping platform Mapbox (2017). A web link to the online map was shared with LOCA and CCRF for their use in dissemination of the images. Figure 5-15 below shows a screen capture of the map marker roll-over state in Mapbox which reveals the paired existing and proposed images.

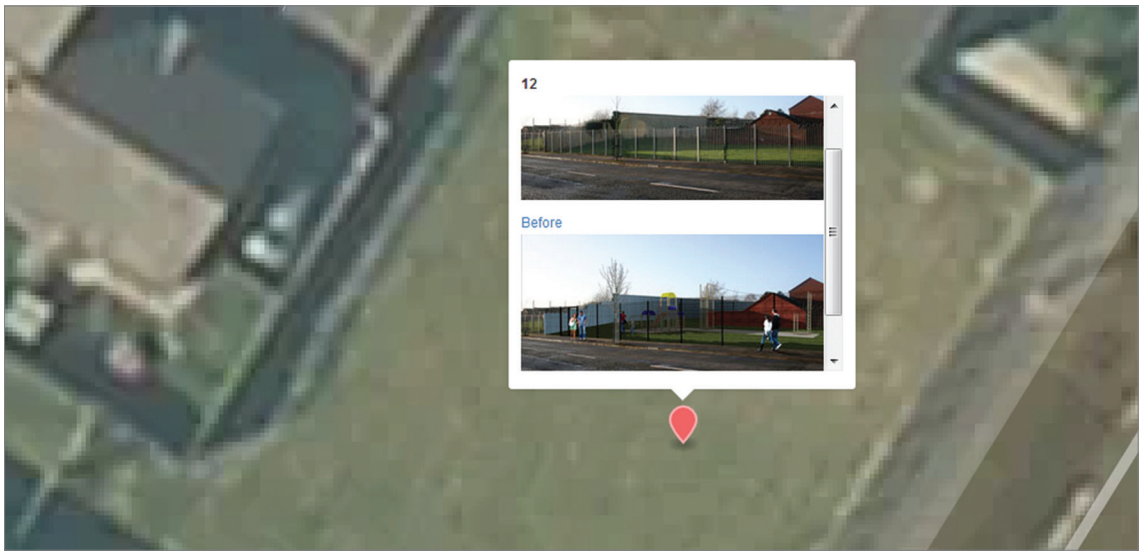


Figure 5-15 Screen capture of Mapbox showing map marker and associated existing and proposed images

5.3.3 Preliminary consultation with Lower Oldpark residents

At an event to launch the consultation project, the A1 panels were presented to the public, specifically residents of Lower Oldpark and local councillors. Comments on the proposed changes were written on Post-It notes and stuck to the relevant panels, as can be seen in Figure 5-16 below. The event lasted approximately six hours. Neither visitor numbers nor demographics were recorded, but all those in attendance were known to LOCA staff, and were welcomed by them. It is therefore unknown exactly who many individuals contributed to the feedback exercise. The

author was present for approximately 60 minutes and observed 17 individuals interacting with the Post-its.

Figure 5-16 Photograph of project launch showing Post-it notes on panels

Comments were gathered and tabulated (see Table E-1 on page 358 for a full list of comments). Content analysis was conducted whereby the comments were categorised as "supportive", "unsupportive" and "other". The majority were supportive of proposed changes. Map markers for each comment were created and colour-coded according to their category then geo-located on the same Mapbox map (see Figure 5-17). A link to this online map was shared with LOCA for their use.

Figure 5-17 Screen capture of Mapbox map showing comment markers categorised

5.3.4 Findings

The comments from the launch event, whilst not gathered according to SpatialGT, gave a strong indication of perceptions by Lower Oldpark residents to changes to the peace wall structure. When cross-referenced with land-use analysis, the following diagram in Figure 5-18 was produced which illustrated the relationship between wall typology and support for changes to the wall.

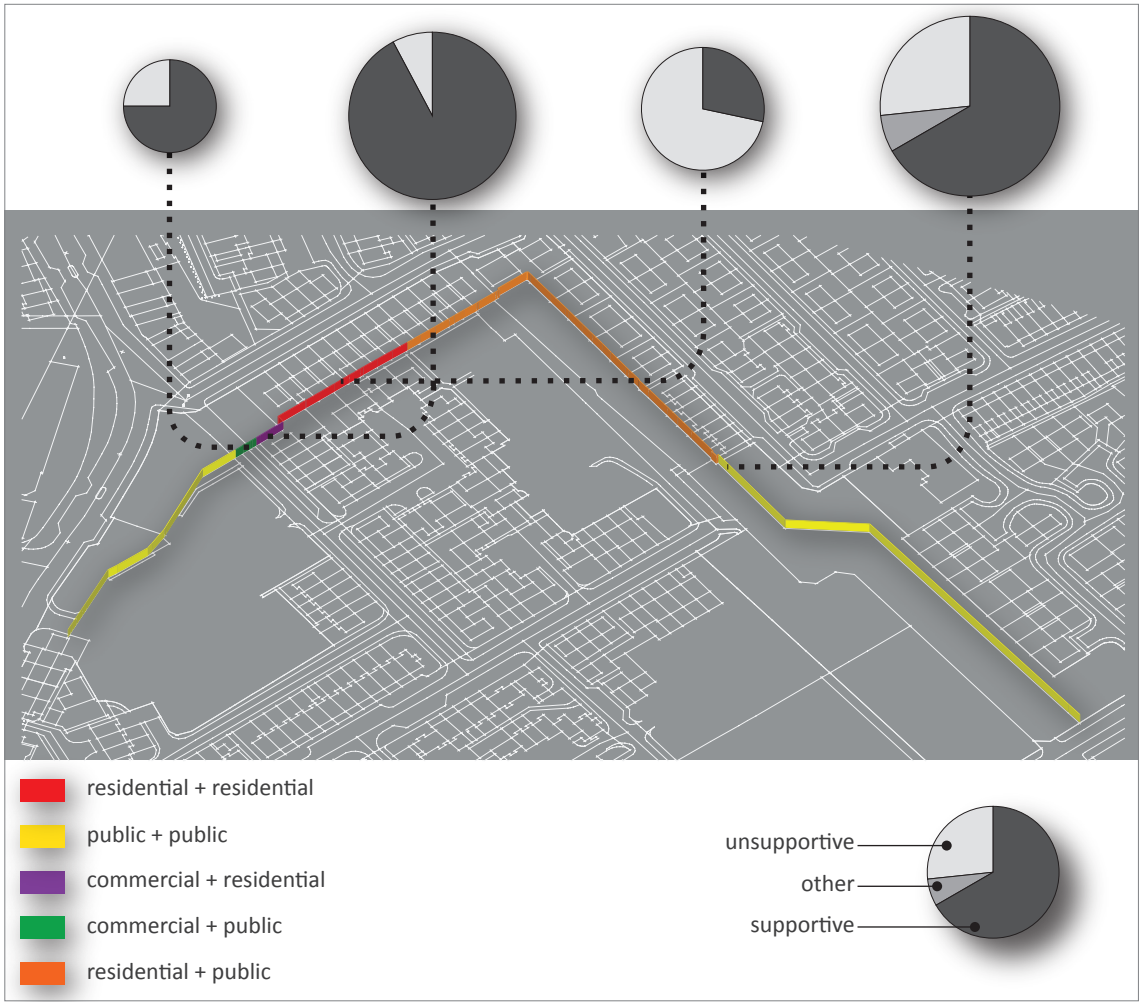


Figure 5-18 Comment - wall analysis (basemap Crown Copyright and Database Rights NIMA DEL MOU 203)

The correlation can be summarised thus: support for change is low when the wall divides residential/residential land. Support is higher when the wall separates public/public or public/residential land, for example "*I think that the wall taken down would be a lot better for both communities and the place would look better.*"

The comments categorised as "other", for example *"Should tidy it up a bit and let kids be involved in doing it"* can be summarised as: requests for the public space to be better maintained, particularly in respect to dog fouling.

It must be noted that this data was gathered on only one side of the wall, consistent

with the Parallel Process Approach whereby different sides of the community engage separately. To have a fuller picture and to achieve research rigour, it would be necessary to compare comments from residents on the other side of the wall. This is particularly the case when interpreting support were the interface separates asymmetrical land use such as public on one side and residential on the other, as the proximity to residential properties might be assumed to affect perception differently there. As discussed later, the equivalent consultation to engage Cliftonville and other CNR residents was not arranged by the corresponding community organisation (CCRF). Again unfortunately, the study of the interfaces was adversely affected by asymmetrical engagement.

5.3.5 Ending the study

Further to this launch event, a number of consultations were planned, to which LOCA and CCRF would invite local residents to group meetings for discussions of the proposed changes. The primary purpose of the A1 panels was to aid these discussions. Data for this PhD was to be gathered by observation at these meetings. The author had communicated regularly with the community organisation since May 2015 regarding the proposed participant observation, and had their full support. Ethical approval was sought and granted on this basis.

There had already been delays to the consultation process due to the removal of the boundary wall of the former barracks site in May 2015, which had been prioritised as an interface issue in the area. By October 2015 however, no consultations had been arranged for the Peace Wall Programme (PWP). After repeated requests for updates and projected time-lines, the following was received via email:

We have a delay in the consultations due to some pressing issues we have

> *been tied up with firstly the application for a project extension for 12 months and secondly we have been informed by DOJ that there are no resources available for any changes to sites at present. (Personal email correspondence, 2015)*

There had been no warning of this formal and longer-term delay, or indeed of the resource obstacles to proceeding with consultations. A phone call following this email confirmed that consultations could not proceed because there was no possibility of realising any proposed changes to the interfaces. The DoJ would not permit outside parties making changes (for example, if the community group could raise money to pay an independent painting company to paint a section of fence) but they had no budget for making any changes themselves. This position was confirmed by a DoJ official in an informal conversation at the Interface Community Partners & Interagency Group Annual Conference in December 2015.

These statements reveal a disparity between the ambitions of the DoJ and the International Fund for Ireland (IFI) who fund the PWPs. The IFI's work aims to support government policy in regard to good relations and cross-community peace building. The relevant strategic objectives of the IFI (2012) are 'to develop and deliver a range of interventions that tackle segregation, and promote reconciliation and integration in interface areas' and 'to engage with individuals and communities that have not previously, or only partially, participated in peace building and community development activities' (p.13). Their focus is clearly on the experiences of individuals living in interface areas and the relationships among and between sides of the community. The PWP was to create a platform for engagement and integration by way of consultation with the aid of visual material where appropriate.

The PWP project appears to focus more on the language of 'consent' and less on the particulars of what is consented to, in terms of the built environment. The project titles, 'Re-imaging the Greater Whitewell' and 'Re-imaging the Peace Walls' assert re-imaging as the outcome of consultation, as opposed to removal specifically. Re-imaging is seen as less dramatic or threatening, and therefore more conducive to cross-community engagement and less likely to alienate. Indeed, at several meetings early in the Greater Whitewell project time-line, community representatives explicitly stated that the word 'removal' should not be used in the course of consultation or data gathering, or in any documentation of such. In contrast, the DoJ budgets reflect a single outcome strategy of removal, where they cannot invest in incremental changes that are supported by the IFI and community groups. This echoes the NI Executive commitment of removal. There is a tension here in that community organisations do not have an incentive to engage communities in the type of re-imaging that was proposed at Lower Oldpark (such as repainting or switching solid panels for fencing) if there is no realistic possibility of attainment. Whether incremental or more significant changes to a peace wall is more sustainable is a separate debate. What is clear in terms of engagement though is that grassroots organisations have more faith in the incremental and policy prefers grand gestures. Ironically, the conversation with the representative that confirmed this DoJ position occurred at a conference workshop which focused on engagement good practice. It would seem that the disparity in the objectives of policy makers and policy support organisations is a key obstacle to engagement.

Following the postponement of consultations at Lower Oldpark, the author made numerous attempts to arrange alternative data gathering events with other groups

such as womens' groups in the area. It was agreed that the visuals should not be used as they belonged to the PWP process. Unfortunately, the author had to give up these attempts because she was informed that meetings were repeatedly cancelled or postponed indefinitely. Representatives were extremely slow to respond to any correspondence and only did so after repeated attempts to engage them. This change in communication style gave the impression that there was no longer any interest in supporting this research project on their parts. The likelihood of any further data collection seemed very low and there was no realistic expectation of getting data within a time frame suitable for this PhD. It was decided that research at this site would be concluded in November 2015.

5.4 Conclusion

In both sites discussed above, attempts were made to test SpatialGT in cases of ethno-national contest. Obstacles to this process were significant. Engagement, access to participants, the perception of the effects of research and financial restrictions beyond the consultation process were the key obstacles. Steps were taken by the author to overcome some of these obstacles; liaising with community organisations who had expert knowledge of the area, residents and the issues at play, adopting an observational data collection process; offering a wide range of engagement and recruitment methods. Ultimately though, there was not enough data to reach saturation in either case. No complete model of emplaced emotion in contested space could be drawn from either test sites. There were however some insights from these studies and some lessons for interface research. The production of the "Interface Typology" 3D maps was an interesting if unexpected output.

They are considered in more detail later in the reflective study. In particular, the "Comment-wall analysis" graphic generated some interest in decision-makers, and the potential to extend this to other sites across Belfast was recognised. Such an exercise would require a different methodological procedure, but could lead to a useful combination of qualitative perceptions along with land-use content.

5.4.1 Physical and emotional interfaces

Mapping processes were used at all stages of the studies and representations of identity, security and movement were accumulated and considered by participants and researcher in a co-produced way. At Greater Whitewell - as anticipated in Chapter 3 - the "working maps" were employed during interviews and focus groups to capture place-specific data and to be used as prompts, visual cues and recording media.

The map in Figure 5-19 below represents a bringing together of the physical and psychological boundaries and interfaces between the two communities at Greater Whitewell as well as using shading to represent emplaced ethno-national identities.

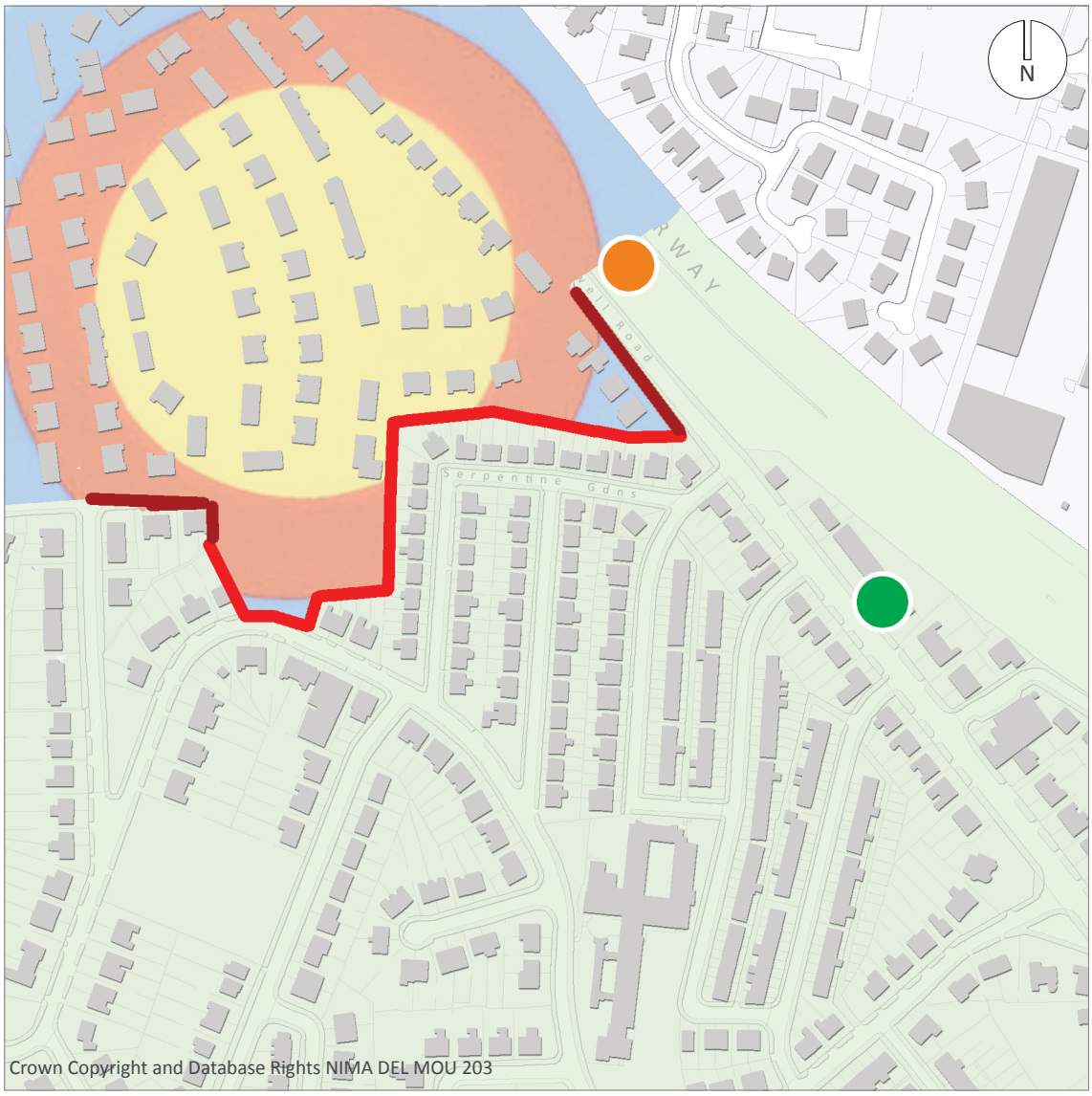


Figure 5-19 Combined interfaces and boundaries at Gunnell Hill

5.4.2 Rethinking methodological protocols

There are key implications for SpatialGT on the basis of these test studies. It became apparent in the course of the studies that recruitment of participants in spaces of ethno-national contested is - to a large extent - governed by at least two sets of gate-keepers, one for each side of the community. The researcher must therefore build relationships with both parties and co-ordinate across two community development programmes. There was a presumption on the part of the author that the cross-

community reimaging projects would provide - among other benefits - a shared time line and a consistency of approach on both sides of the interfaces to achieve unified outputs. This however was not the case, and much time was lost waiting for equivalent work to be done on each side. The implication for engaging participants using SpatialGT in future was clear. It is not possible to ensure the collection of balanced, equivalent qualitative data from each side of the ethno-national divide due to the Parallel Process Approach and associated idiosyncratic engagement methods used by each side. While data might be gathered from both communities, they might not be of comparable or equal quality or rigour. Using SpatialGT in such research contexts will require more in-depth knowledge of the workings of these social and organisational structures and seek to construct new relationships with potential participants, by way of incentives or third party organisations who have capacity to reach these communities.

In addition to this challenge to research recruitment, it is also noted that there are underlying issues of the acceptability of community narratives in areas of ethno-national contest that might adversely effect a community's interest in participating.

5.4.3 Recommendations for further study

In the case of Lower Oldpark/Cliftonville, the timing of this study perhaps clashed with a key stage in the Girdwood development and the associated community concern with the impact of removal of the boundary wall to the east. The site itself for many generations acted as an interface, separating the east side of PUL - identified Lower Oldpark from the CNR - identified Antrim Road. As can be seen in Figure 5-20 below, this interface evolved over time from being a row of houses to a high brick and sheet metal structure. It was replaced in 2015 with a transparent

mesh fence as as part of the development of the former barracks site into a cross-community leisure facility.

Figure 5-20 Boundary to Girdwood Site past (left) and present (right)

The development plan for the site included the reinstatement of buildings along Cliftonpark Avenue which bounds Lower Oldpark to the east (see map in Figure 5-21 below). This would re establish a building line, albeit set back from the road, along what was formerly a main road connecting two distinct areas in North Belfast. It would also act as a buffer between the residential Lower Oldpark and the new leisure facilities, thereby potentially reinstituting a degree of separation across the sites.

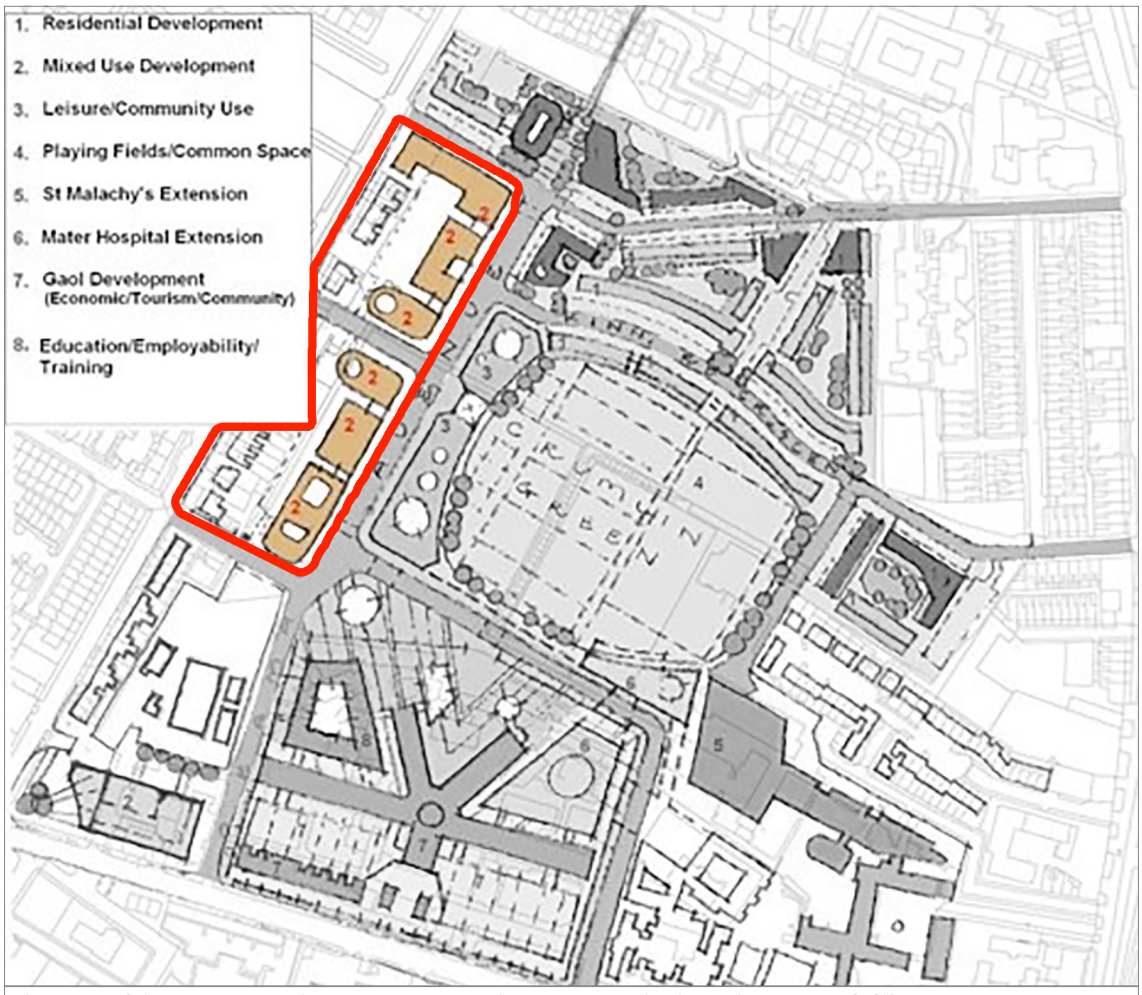


Figure 5-21 Map showing proposed mixed-use buildings in west of Girdwood development which would bound the eastern edge of Lower Oldpark. (Source: (Cliftonville Community Regeneration Forum, 2010)

Perhaps further research into the impact of contemporary and ongoing transformation of Girdwood - including the treatment of this western boundary - on emplaced emotion in Lower Oldpark would be a timely continuation of this work The use of images similar to those in Figure 5-20 on a time line might prove useful as vehicles for discussion, much like the graphics used in the consultation at Lower Oldpark.

When perceptions, opinions and feelings are mapped, they take on a new, physical property. Like all maps, these emotional mappings tell a particular story, of a specific place at a specific time. Without a balanced representation of the different and often

polarised perceptions in contested areas, these maps will soon become skewed by the narrative of one, and run the risk of misrepresenting the community as a whole. For this reason, it is imperative that residents on both sides of the community divide are represented.

The issues of engagement and of narrative incoherence might be related to broader constructions of self-representation as described by Shirlow (2003b) thus:

> *Community based self-representation assumes the form of a mythic reiteration of purity and self-preservation. [] Indeed, for political actors the capacity to win political support has been based upon delivering a singular narrative of victimhood and exclusion. (p.91)*

This assertion of interface community narratives resonate with the findings in these studies. In both, the reasons for the cessation of data gathering can be regarded in some sense as related to victimhood; in the first instance a re-victimisation by virtue of participation and in the second, through lack of resources for the planned community development work.

On a more positive note, the study at Lower Oldpark/Cliftonville provided sufficient data for an interesting mapping process - comment-wall analysis - which, as described later in this thesis, has particular strengths as an output. It provides the basis for a potential analysis of the peace walls that might help communities monitor and locate consent for future changes to walls, based not only on land use but also commemorative and spatial concerns.

It would be important in future testing or application of SpatialGT to consider the degree to which communities are still actively traumatised by issues that demarcate them as contested. It was perhaps ambitious to assume that this type of detailed,

personal research would be possible at Gunnell Hill/Serpentine Gardens when the community is clearly still actively coping with ongoing issues of violence and trauma. Perhaps the study discussed in the next chapter -focussing on less violent contest in a contested residential setting - would have been a more productive beginning to the testing of SpatialGT and might have illuminated some of the limitations of the methodology.

Chapter 6 SpatialGT in a case of Residential Contested Space

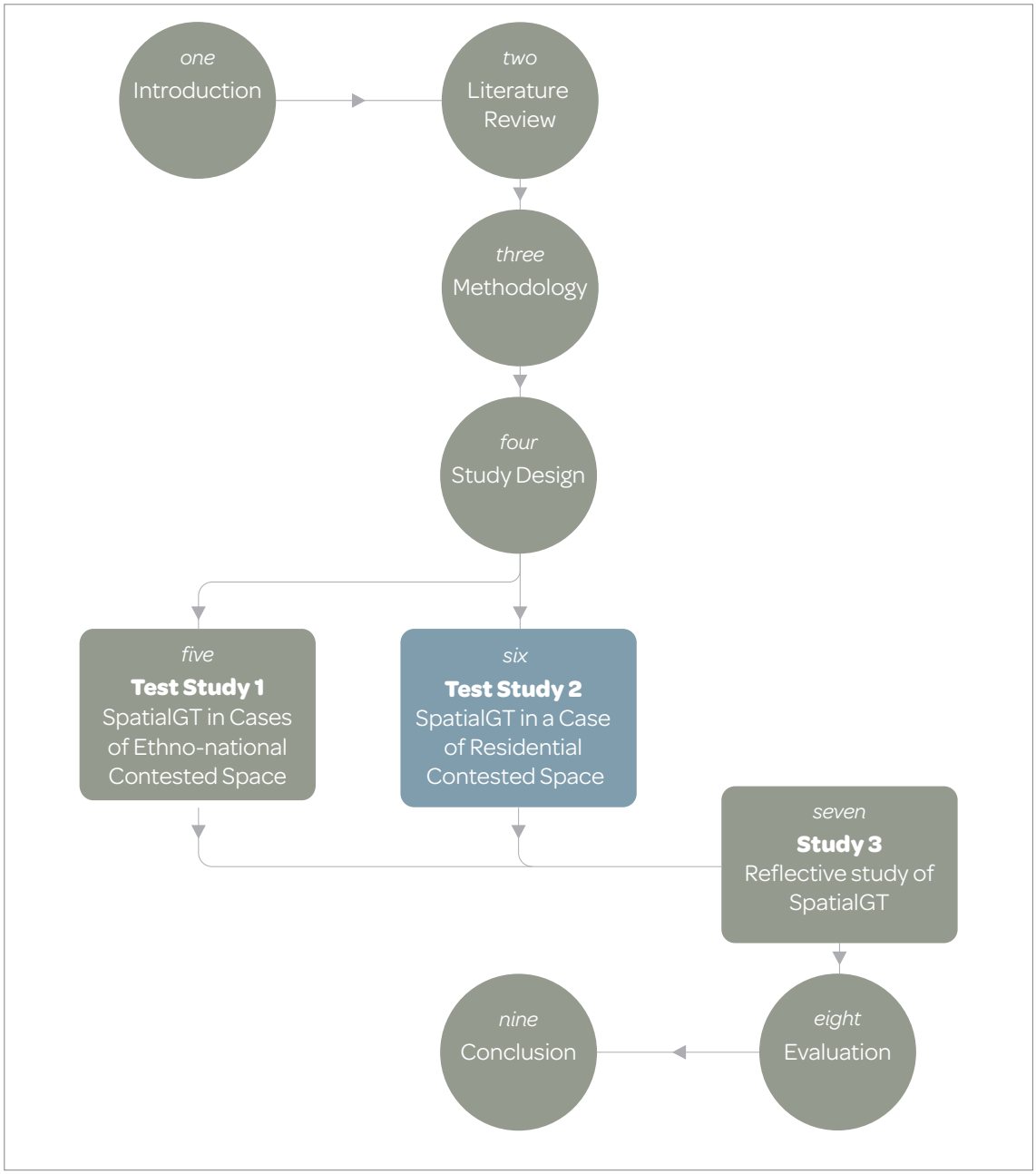


Figure 6-1 Diagram showing all thesis chapters (vi)

6.1 Introduction

In the previous chapter, SpatialGT was tested in several cases of ethno-national

contested space, which proved a complex, protracted and delicate process. Given the history of loss, insecurity and conflict in these sites of contest, it is not surprising that the method unearthed personal as well as institutional obstacles to expression and change. In this chapter (see Figure 6-1), SpatialGT is tested in a contested space which is colloquially called the Holyland, known for its ongoing contest between long term 'settled' residents, a transient student population, landlords and increasingly, black and minority ethnic (BME) communities, in particular the Roma community. It is an area "where the contest relates to issues of *pluralism*, and centres on disputes about imbalances in power, welfare and status between the distinctive rival groups" (Morrissey & Gaffikin, 2006, p.874, emphasis added) in contrast to the sovereign nature of contest at the sites in the previous studies.

The nature of the contest between groups has come to be referred to as 'lifestyle clash', where the day to day lifestyle habits, preferences and behaviours of one group cause anything from disruption to risk for another. SpatialGT research was conducted with a variety of stakeholders ranging from legislators to residents, in order to explore aspects of the contest, engagement processes and their emotional impact. A combination of data collection methods was used, as described in *4.3.2 Methodological procedures in Test Study 2* on page 139. The data revealed a complex interplay of common issues and concepts. From this, several key themes emerged and are explored in detail in *section 6.3*. The concluding section summarises the process of emotional mapping in the Holyland and sets the scene for the next study.

6.2 Engaging with the Holyland

Certain aspects of the collection process were modified from those used in previous interface studies. This was for two main reasons. Firstly, the role of the author was wholly independent in that the Holyland study was not associated with or a part of any other ongoing studies. This distinction allowed the author greater freedom to not only build relationships with stakeholders but also to explore her own position in relation to participants and the emerging data. Secondly, there are some key differences in the way stakeholders engage in this site. The nature of contest in this study is very different to that at interface sites, not least because identities of communities involved are not as polarised or entrenched as ethno-national community identities. There is not the historical, political and sectarian weight of division in the Holyland. This particular contested space does not necessitate the use of any given set of 'accepted narratives' as was seen in the interface typology, and the dominant narrative of any one community group is not subject to the same pressures as cross-community interface organisations. Whereas interface and other single identity communities tend to fall in with key community organisations who act in their interests that is not the case here. Identities are more varied, nuanced and heterogeneous within their common categorisations. For example, some student residents suffer as a result of noise pollution and anti-social behaviour, while others are the cause of it. Such diversity in stakeholders, particularly long-term residents, has led to a multitude of community groups, each with its own focus. These groups are very vocal about their own area of focus and are free to lobby and organise on their own behalf [Community organisations are actively encouraged by council and NI Assembly representatives to lobby and organise, as observed at a public

meeting]. Because of the differences in the way stakeholders engage, identify, organise and - most importantly for this research - express their own experience of contest in the Holyland, different methods were employed to engage them in this research. The key difference was that the author acted more directly and sought to reach individuals and organisations by attending PACT meetings, public meetings, community group meetings, reaching out to Ulster University staff members and using her own lived experience in Belfast to network among relevant people.

6.3 Findings

The two essential components of data analysis for SpatialGT are thematic analysis and mapping. Firstly, thematic analysis is described in brief, and after that, the mapping process is explained.

Data analyses were carried out as soon as data was available. Working mappings based on emerging themes were then used in subsequent interviews to prompt further discussion and verification. A sample blank ‘working map’ is included here in Figure 6-2 below.

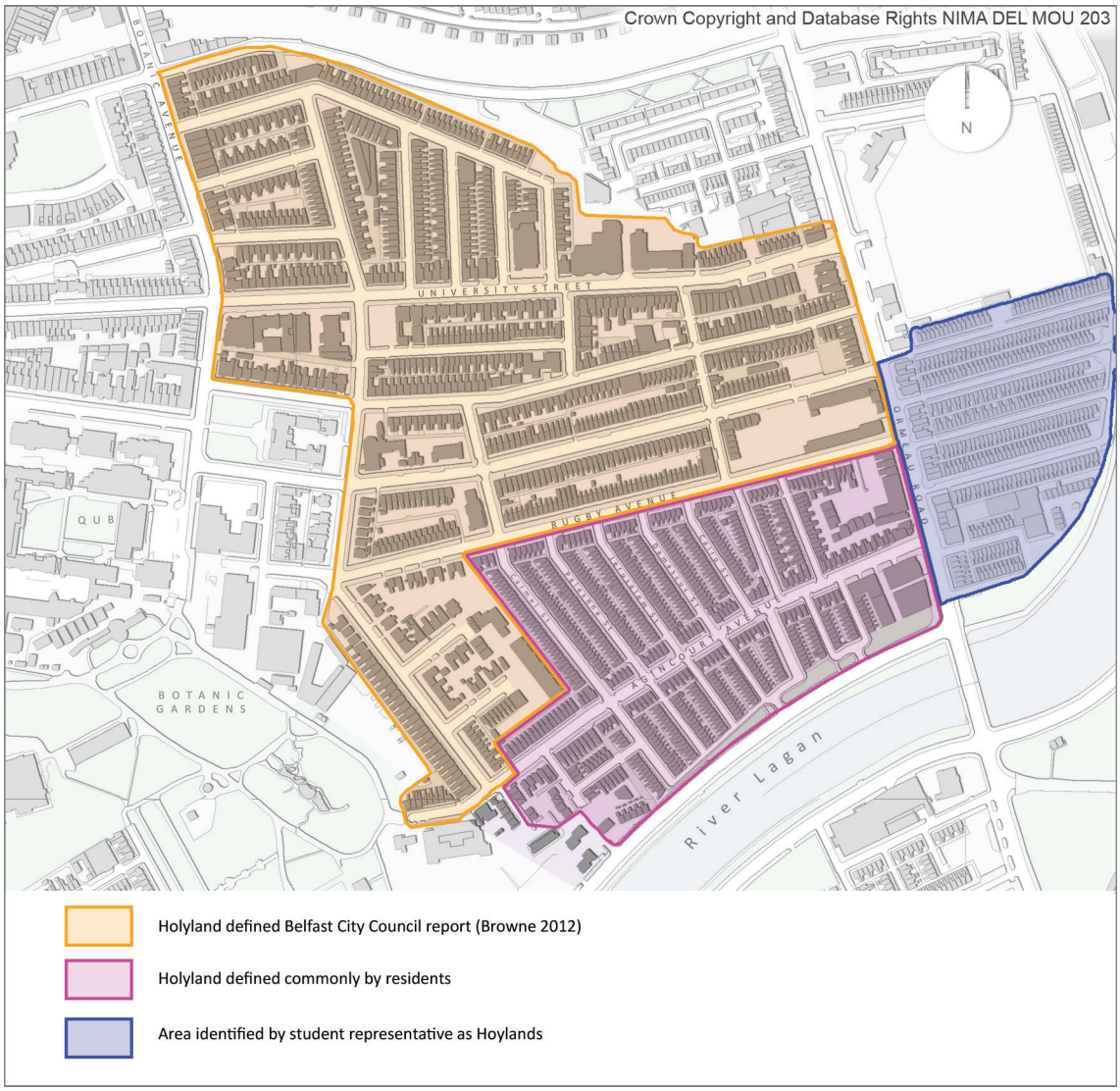


Figure 6-2 Sample 'working map'

As more mappings based on interview data (or other datasets such as HMO locations) were drawn, they were brought to the subsequent interviews.

After several rounds of ordering and reordering, codes were then filed under the following headings: stakeholders, emotion, resources, integration, mapping, future, decision making. The following lenses were applied: temporality, spatiality, capacity, information. By looking at the intersections of these concepts, a number of themes emerged:

- Theme A: Fractured communities and the impact on decision making
- Theme B: The consequences of contest
- Theme C: Physical, emotional and temporal resources in a transient neighbourhood
- Theme D: Overcrowding and HMOs; when the spatial and becomes the emotional

The diagram in Figure 6-3 below shows how the themes are connected to and encapsulate different aspects of the codes.

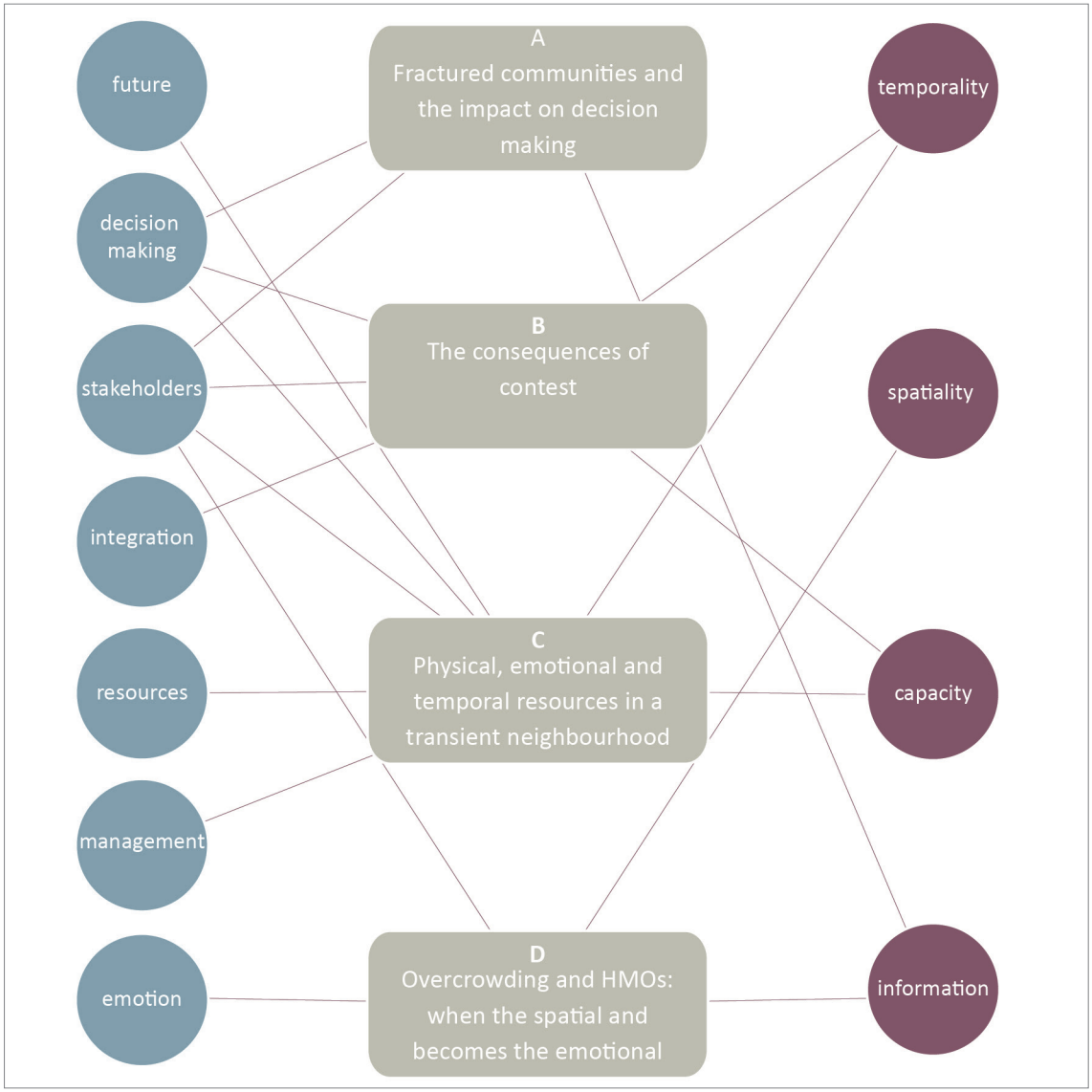


Figure 6-3 Framework of codes and themes (author's own)

6.3.1 Theme A: Fractured communities and the impact on decision making

The different stakeholder groups as identified by participants are summarised thus:

Table 6-1 Stakeholders as identified by participants

Resident stakeholders	
Groups	BME organisations
	Residents associations
Local resident community	Long term
	Short term
	Residents with mental health issues
	Families
	Elderly residents
	Children
Non-national community	Asylum-seeking community
	Roma
	Muslim community
	Chinese community
Student community	First and second year students
	Third year students
	Graduates
Communities of risk	Sex offenders
	On-release ex-convicts

Non-resident stakeholders	
Statutory bodies	Belfast City Council (BCC)
	Police Service of NI (PSNI)
	NI Fire Service
Private enterprises	Higher Education bodies
	letting agents
	landlords
	the media
Communities organisations	Lower Ormeau Resident's Action Group
	South Belfast Partnership Board
	City Church
	BME anchor groups

The theme of *fractured community* occurs in a number of ways in the data. There are two main manifestations of this division. The first most obvious one is seen in the high number of stakeholder groups with differing and often conflicting needs and influences, as can be seen in Table 6-1 above. The second is fractures within communities; perceived differences within stakeholder groups. These variations

are not always understood clearly, and through lack of visibility or engagement, the complex needs of any user group might not be met. From the outset though, the diversity of the Holyland population combined with the geographical advantages that make it attractive to students and new communities have to a large extent skewed Multiple Deprivation Index statistics for the area and therefore it is perceived that despite its high need for resources it is overlooked by statutory bodies.

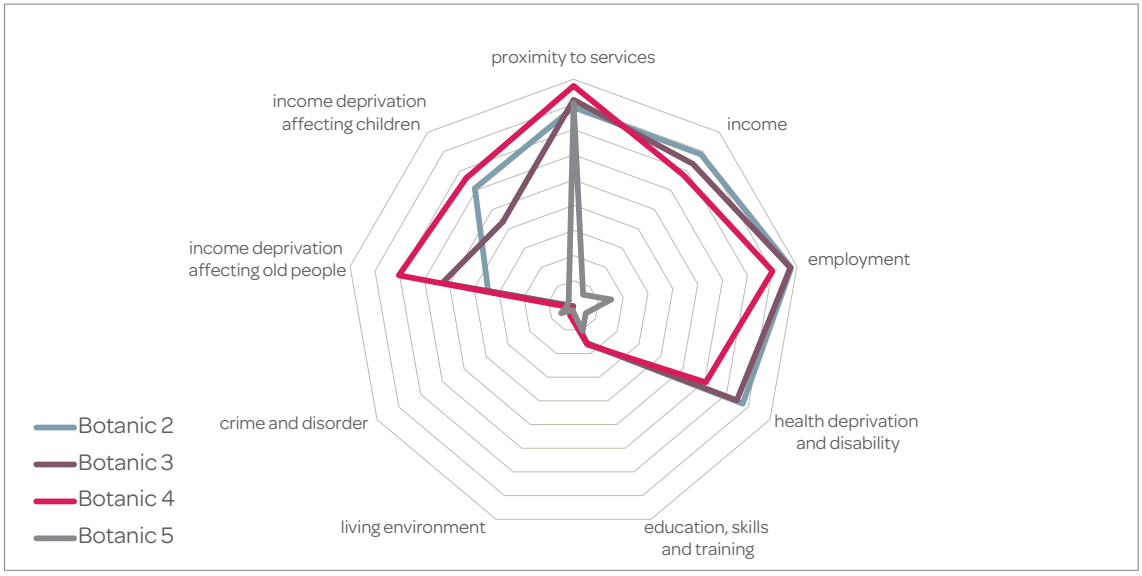


Figure 6-4 Deprivation rankings for Botanic 2, 3, 4 & 5 (data sourced from NISRA, 2010b)

The diagram in Figure 6-4 above brings together deprivation data for the four Super Output Areas (SOA) that cover the Holyland. High rankings denote low deprivation and the indicator is marked towards the outside of the diagram. The consistent low ratings of living environment, education, skill and training and crime and disorder deprivation across the four SOAs means there is a high deprivation in these indicators across the Holyland (Botanic 3 is actually rated Number 1 in NI for crime and disorder).

Because a high proportion of the population is transient, data gathered for these

statistics do not tell a complete story of the residents. In many cases, students will not register their term-time address with HMRC, the Health and Social Care Trust or other bodies that generate deprivation data. In addition, the indicators used for income in particular are not relevant to a largely full-time student population. Students are not be eligible for the social security benefits on which income deprivation statistics are based. It is therefore doubtful that the low Income Deprivation ranking in Botanic 2, 3 and 4 reflects an actual lack of deprivation but rather this ineligibility for state income support.

The transient nature and often undocumented status of the Roma and other BME residents contribute to a further inaccuracy in data reporting. As highlighted here by a legislator, there is a sense that the area profile in its diversity does not fit the standardised profile ascribed to geographic areas in order to assess need and resource management.

> *the area has been neglected in terms of resource and actual acknowledgement that it's there because it is a ...diverse community and therefore it has not fitted with the sort of tick box*...(Participant HL7, 2016)

In order to attempt to meet the needs of the communities, the PACT group has drawn up an action plan. The plan seeks to identify need and delegate responsibility where is it can be best met. While this approach has merit, the sheer number of different identities poses a unique problem for this area. Whereas in other areas of the city, communities organise around specific issues e.g. social exclusion, ethno-national identity or heritage, the Holyland is made up of groups and individuals with a range of socio-economic, political, religious, educational, cultural, national and identities. It is therefore difficult for authorities to hear and respond in a systematic way. The

following quote is from a legislator who highlighted this fractured engagement process:

> *even the residents who are trying to get themselves together and put forward a coherent voice are very, very fractured because they all endure different circumstances. They don't have a coherent voice and they don't have a coherent lobby or group or whatever so even, for such a small community they have quite a few residents associations. They try to work together, then they all fall out. So when the statutory agencies come in to try and sort of work with them, then it's who's talking to who at the time* (Participant HL7, 2016)

Responses to complaint must be made on an almost individual scale as opposed to a grouped or community scale which is demanding of time and resources, and ultimately less effective than traditional community development strategies. As stated by the same participant:

> *so you're nearly fighting one on one when the issues come up....Its huge, its huge and without a doubt [the Holyland] is the area as an elected rep for South Belfast that takes the majority of my time.* (Participant HL7, 2016)

These opinions were shared with two other MLAs at the public PACT meeting (HLm5). At this meeting the MLAs also echoed each other's advice that groups should not wait for new legislation - which can take years to come into force - to prompt changes but to organise, collaborate and bring forward their own agenda in a community development model.

In addition to issues arising from the diversity of the Holyland population, there are further obstacles to engagement which are unique to different stakeholder groups or categorisations. Community groups such as College Park Avenue, Rugby Road and

Stranmillis resident associations do not identify themselves as part of the Holyland geographically, but are active in consultations about the area. A participant described a 'cattlegrid' at the junction of Rugby Road and Agincourt Avenue this:

> *Well I think of the Holyland as finishing at that corner in my head that's where it finishes and, in fact, one of the really odd things about Saint Patricks Day is that it's like there's a cattle grid just at that end house* (Participant HL4, 2016)

In the case of Rugby Road and Agincourt Avenue, where this cattlegrid effect is identified, it is at the interface of very distinct resident identities as well as architectural distinctions; to the west, owner-occupiers inhabit large, elegant Victorian townhouses with decorative brickwork and gardens to the front and rear while to the east, Agincourt Avenue residents are almost exclusively transient student or BME living in buildings subdivided into apartment and high-density HMOs with little or no curtilage. Rugby Road is the quintessential leafy, well-maintained, residential Victorian vista with original pavement slabs, while Agincourt Avenue appears as many of the streets in the Holyland to be unclaimed and generally run-down. Figure 6-5 below shows views of the respective street from this junction.

Figure 6-5 Views of Agincourt Avenue (above) and Rugby Road (below) from so-called cattle grid location (author's own)

It is curious, and perhaps pertinent to this thesis that the distinctions between two such neighbouring streets can cause a marked behavioural effect that is emplaced so precisely.

One participant suggested that:

> *this street is kind of off-putting cause it's like "their mummies and daddies live here" sort of attitude cause it is a street full of grown-ups and not tolerant of the silly nonsense type stuff. So somehow or other, it's very*

much holding back the tide (Participant HL4, 2016)

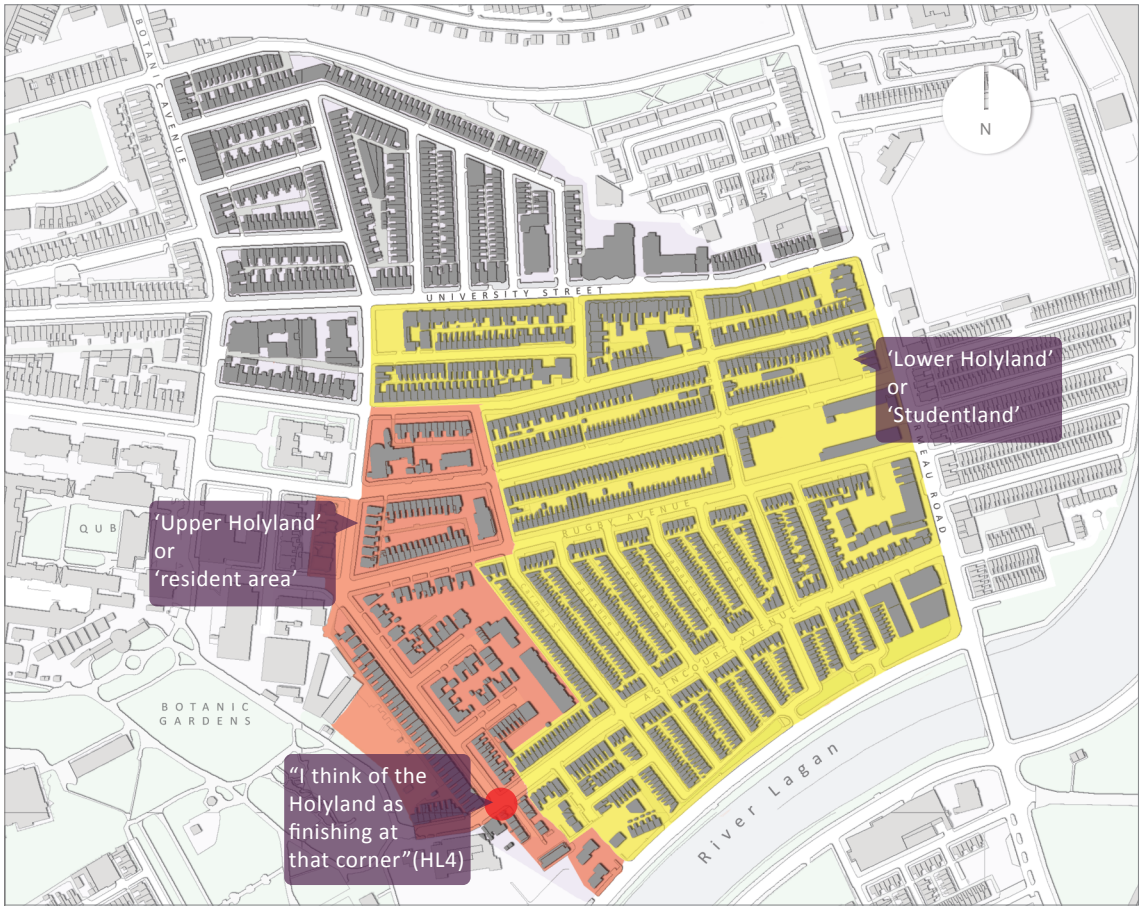


Figure 6-6 Map (nts) illustrating perception of 'cattlegrid' effect dividing distinct areas within Holyland

The map in Figure 6-6 above shows this corner marked with a red dot. Additionally on this map is division of the area into "upper" and "lower" Holyland. These terms were used in the course of the interviews by several participants. 'Upper' and 'lower' are common distinctions in Belfast street names to differentiate the geographical proximity to the city centre (e.g. Lower Ormeau Road runs from the city centre to the river, and Upper Ormeau Road continues beyond) due to the radial nature of most main roads. However, the distinctions have come signify socio-economic conditions as well, with 'lower' denoting cheaper, working class and 'upper' synonymous with middle-class and higher land value. The use of these

words in the case of the Holyland is a tongue-in-cheek reference to the area in red on the map in Figure 6-6 being more 'posh' or middle-class.

Roma population numbers (currently believed to be 1,500-1,800 according to a council member interviewed) and other BME groups who make up a growing proportion of the resident population are very reluctant to engage due to stigma and perceived lack of support. In an informal interview a participant said "they were not surprised that Roma did not attend public meetings anymore because of the way they were spoken to when they did attend."(HLi3). Many organisations such as RRCANI, MFANI, the Chinese Welfare Association and the South Belfast Roundtable all work with these new communities directly and the Green Party office on University Street offers a shared space for all new communities to use as a resource. Even within the ethnic Roma group, different sub-groups are perceived from the outside as having different needs and lifestyles. The following quotations in Table 6-2 show this theme re-emerging in the data:

Table 6-2 Data extract: perceptions of heterogeneity in Roma/Romanian community from other users of the Holyland

code	*who*	*quotation*
Families differ from other groups	HL1	*Roma families who have kids and they get up and they go to school and they lead a normal sort of lifestyle. That would be very different from the level of acceptability of the problem Roma people that they see because they're not the same people but the Roma.*
Not homogeneous	HL2	*[Roma resident community] is not a homogeneous community*
Old and new communities	HL2	*[Roma residents] are from the old communities or the new communities*

Among student populations also, there is a perception that not all students have the

same needs or indeed create the same tensions for other residents:

> *because we get a lot of complaints about second year and third year students against first year students because suddenly their exams count and it matters you know so our noise team for example would have a rising number of complaints about students from students.* (Participant HL1, 2016)

A novel solution proposed by a participant responded directly to this issue:

> *So you can't force them to do it but ideally if we could get agreement that on one street that the only students that would go in would be third year final year students or older.* (Participant HL1, 2016)

While the solution is no doubt wrought with practical, financial and ethical implications, it is however an interesting proposition that warrants some consideration.

When considering the fractured nature of the communities and the impact on engagement and decision making, issues arose at three scales. At a statutory level, the diversity of the population has led to it being overlooked statistically as an area of need. At a management level, the wide range of stakeholders creates a complex interconnection of need and management responsibility. At a community level, fractures among stakeholder groups divide the limited resources available and weaken the overall voice of any stakeholder group.

Extreme high-density living has negative effects for everyone. Without sufficient private or semi-private places to congregate, socialising occurs in public spaces, leading to noise disturbance and waste pollution, or not at all, leading to isolation. The high demand for short-term rentals in the university area led to a dominance

of HMO and other rental properties which, due to their profitability for landlords, are unlikely to be available for more settled, non-transient communities who might shift the demographic and general atmosphere of the area. This, combined with the lack of resources in terms of play/green areas, makes it unlikely that the trend of transience in the population will change any time soon. There is a perception that the introduction of PBSA elsewhere in the city will have little impact in the Holyland, as rental prices in the area are likely to be cheaper. One participant highlighted their own decision making as a parent about PBSAs versus the Holyland, based on a choice between personal safety and rental cost and their perception of how this shared perception might impact the Holyland:

> *if I was a parent sending my child, I would want them in safe accommodation. You know so it's not every parent is going to choose the cheaper option"* (Participant HL7, 2016)

Additionally, there is an existing pattern whereby groups of school-leavers seek out the larger properties in the Holyland so they can live together. PBSA are unlikely to offer this opportunity.

The introduction of large-scale housing units will have a major impact across the city, in particular the Cathedral Quarter and areas close to it, creating new demand for a variety of services. The impact of this project on the Holyland as a popular student area is unknown at this time. Already though, there is a perception that the provision of purpose-built student accommodation in the city centre will raise the expectations of incoming students, and that the housing stock in the Holyland and the lack of provision of services will make it less desirable or acceptable for students. Several outcomes are under discussion by stakeholders at present. Some believe the

area will fall out of favour with students causing a reduction in student density and 'backfill' where a non-student population becomes dominant. There are fears that backfill might attract transient immigrant communities who do not integrate, but there is hope that families and professionals will begin to move in and create a more settled, integrated community. The power to direct this change lies largely within the domain of landlords, as there is very little social housing in the Holyland and property prices are inflated due to its location. It is likely to remain a renting area for some time. The extent to which landlords seek to accommodate students in a more competitive property market - by improving HMO living conditions, services and value for money –will have a bearing on the future density of students. The non-HMO landlords' preferences to let to immigrant families who live in much higher densities (and therefore pay higher rents) might limit opportunities for local families to move in.

Another theory for the future of the Holyland is that the increased choice in type, location, cost and quality of accommodation elsewhere will create new, distinct characters for different locations and the Holyland will develop a more niche student character of its own. Smith and Hubbard (2014) posited that socio-spatial divides among students of different economic backgrounds may be reinforced with the introduction of PBSAs when wealthier individuals move to the more expensive PBSA and less affluent student opt for "lower cost accommodation in HMO within established neighbourhoods" (p.99). One possible consequence of such socio-economic student ghettoization on HMO-dense neighbourhoods such as Holyland, Botanic, Lower Malone and Stranmillis is a worsening cycle of behavioural and environmental change; that they further become perceived as under-managed,

unregulated, inferior in quality and therefore the natural site for student revelry and anti-social behaviour, which in turn leads to even more of the environmental, physical, social and cultural degradation associated with studentification.

6.3.2 Theme B: The consequences of contest

Many consequences of living in an area of contest emerged. To provide some structure to this, they were categorised into sub-themes which are explored in turn. Table 6-3 below lists the sub-themes which emerged. They are categorised thus; educational, emotional, mistrust, noise, reputations, risk.

Table 6-3 Coding the consequences of contest

educational	children failing in school
emotional	narrative incoherence
	prescription medication
	PTSD in resident community
	self-medication
	sleep disturbances and knock-on effects
mistrust	conspiracy theories
	distrust of authority
	landlords with politics poser cannot be trusted
	landlords bend the rules
	corruption
	landlords accessing properties illegally
noise	coming and going late at night/ thoroughfare
	house parties and music playing in the houses
	complaints from second or third year students
	noise from doors banging
reputations	landlords' reputation
	media influence on reputation of area
	perception of migrant communities
	minority of students create bad rep
	student party area
	reputation linked to disengagement
risk	burglary
	sexual violence
	perception of increased risk for women

Whilst these categorisations might not carry equal weight of importance in a traditional typological sense, they appear here alongside one another due to their

unique importance here in the Holyland. While they are divided here, there is much overlap between sub-themes, and there are significant relationships between them. These interrelationships, displayed graphically in Figure 6-7 below, add to the complexity of the model of understanding for this portion of the case study (note the relative sizes of the circles corresponding to each sub-themes represent the frequency that the sub-theme was referred to in data gathering).

Figure 6-7 Interrelationships between sub-themes

The data reveals personal experience of consequences, beyond - or perhaps within

– the well-known and reported narratives. Some examples are extracted here by way of illustration.

6.3.2.1 Emotional

> *There is a huge amount of emotion in every single thing that we do and very little of it is positive* (Participant HL1, 2016)

Living in an environment of continuous contest is acknowledged in the resident population as having significant emotional consequences. Key issues were identified as sleeplessness, self-medication, prescription medication use and PTSD. Further to these, stakeholders mentioned:

- anxiety
- vulnerability
- sense of unfairness
- isolation
- high stress levels
- holding on to past hurts/ troubling memories
- hypervigilance, especially around particular dates associated with disruption
- fear of hate crime / strangers
- complaining / need to blame / double blow of voicelessness
- disengagement

6.3.2.2 Mistrust

This sub-theme - which rose most often in relation to perceptions of landlords - reappeared many times and is interconnected to the other category of reputation and risk. Trust - or its lack - is fundamentally an interpersonal issue, in this case between conflicting groups of people who co-exist or, in the case of landlord-tenants

relationships, who have certain obligations to each other. It brings attention to the importance of honest interaction between stakeholder groups in order to overcome issues of mistrust. Table 6-4 below lists the codes that were extracted from the data relating to mistrust. Some landlords are seen to be in a more powerful position than students and other tenants, and to abuse that position in a variety of ways such as accessing properties without prior notice, "getting away with things" such as lack of proper maintenance of properties, and "bending the rules" in the case of keeping deposits without just cause.

Table 6-4 Data extracts relating to the sub-theme of "mistrust"

code	*who*	*quotation*
trust - distrust of authority	HL2	*"distrust of authority"*
trust - landlords with political standing cannot be trusted	HL2	*Some of the excellent landlords are a little power thirsty because some now have political clout. There's a question of whether they are independent, can be trusted so there are always issues. So for landlords there's good, there's bad, there's indifferent. That's an issue.*
landlords bend the rules	HL5	*I think that landlords too, a few in particular, do sort of bend the rules a wee bit and that had come to be as well and we had to, we had to forward that onto Housing Rights and they said that they were aware of it too and Belfast City Council were aware of it too.*
corruption	HL5	*they know the students are a bunch of vulnerable sort of cohort and they're not probably well up on their housing rights and so there's a lot of sort of I don't know, I'm going to say corruption you know in terms of landlords getting away with things.*
landlord accessing properties	HL5	*over Christmas and the landlord, the original landlord had let himself, took the freedom took the liberty to let himself into the, all the properties where this new letter was being sent and he had removed the letter so that their rent would be sent to, would still keep going to him*

6.3.2.3 Noise

The way in which noise pollution was discussed highlighted unique spatial and temporal characteristics that enrich a more general understanding of the area being noisy. In some cases, the noise from party-goers on the streets is the most offensive. The quote below shows the nature of the disruption to a resident:

> *They're just going to any random houses that they think is partying, and then they're standing in the street on their phones shouting, singing, cursing, shouting what would you say, Republican slogans that sort of thing.* (Participant HL3, 2016)

In this case, not only was the noise disruptive, but the language and political content was also offensive. The issue of street noise disruption overlaps with spatial issues of overcrowding discussed later.

Noise pollution also alienates different sub-groups from each other and can lead to further inter-group tensions as illustrated in the quote on page 211. Additionally, the codes in below in Table 6-5 informed this sub-theme:

Table 6-5 Data extracts relating to the sub-theme of "noise"

code	*who*	*quotation*
coming and going late at night,	HL6	*coming and going late at night,*
house parties and music playing in the houses	HL6	*house parties and music playing in the houses*
noise from doors	HL6	*noise from doors*
thoroughfare	HL4	*And in term time as well, would be the thoroughfare and there would be noise and occasional damage but not so much, not so much anymore. But term time is pretty messy round there and noisy, noisy, noisy as they leave.*

6.3.2.4 Reputations

The reputations of landlords, migrant communities and students in the Holyland in particular is regularly attacked by other contested groups, and the general reputation of the area suffers as a result. Landlords are accused of everything from corruption to greed, irresponsibility to neglect.

> *we've got some dreadful landlords and they really they have, they're ruthless because it's all to do with money therefore they're not just going to turn, roll over easily* (Participant HL4, 2016)

In the interviews gathered, migrant communities are blamed for a variety of criminal, anti-social and disruptive behaviours. See Table 6-6 below for further examples of codes and quotations relating to this sub-theme.

Table 6-6 Data extracts relating to the sub-theme of "reputations"

code	*who*	*quotation*
perception of migrant communities	HL6	*We've a large migrant community there have moved in. we have Syrian refugees have moved in, in small very small numbers. We have around fifteen to eighteen hundred Roma in the area which are a large group mostly you would see Roma families*
reputation - minority of students create bad rep	HL5	*there's a lot of attitudes need sort of adjusted and a lot of I suppose stereotypes about students as well that need to be changed and rectified because you know it really is a minority of students who give it the bad rep*
reputation - student party area	HL5	*So, that's my own personal opinion. In terms of the party reputation, yes don't know how it happened but it just seemed to have that reputation that this is the place to be for a student and it really is unfortunate cause I know that there's lots of residents there. I'm not even sure the students know.*

reputation linked to disengagement	HL5	*Probably reputational damage of students you know? They certainly do get a bad rep and it doesn't reflect good on Ulster University students as well as Queen's students and there's also I suppose the risk that because the way they feel you know a bit of isolation that they'll begin to sort of disengage, you know emotionally detach from the Holylands so again if, I think of residents are seeing them as an annoyance and that they don't belong there they now think that students will you know simply not care anymore about the area that they live in.*

6.3.2.5 Risk

Comparing the commonly held narrative of risk and crime to the lived experience in relation to the sub-theme of risk revealed a slightly surprising result. While actual crime statistics show the area to be among the highest crime and disorder areas in Northern Ireland, there is a sense that this is not acknowledged and provided for, and that students are naïve to the risks to an extent.

> *We find it hard to get in and do the community safety work so to try and get out the message that this is the highest crime rate in the whole of Northern Ireland that your chances of being burgled several times are really quite substantial, that the rape and sexual abuse that happens during St Patrick's Day, freshers week you know all these party times of the year, these messages aren't getting out (Participant HL7, 2016)*

The quotations in Table 6-7 further illustrate the perception of crime in the area and the lack of resources to protect and help residents.

Table 6-7 Data extracts relating to the sub-theme of "risk"

code	*who*	*quotation*
burglary	HL7	*this is the highest crime rate in the whole of Northern Ireland that your chances of being burgled several times are really quite substantial,*

sexual violence	HL7	*that the rape and sexual abuse that happens during St Patrick's Day, freshers week you know all these party times of the year, these messages aren't getting out*
sexual violence	HL5	*particularly young women as well cause you have, from my knowledge anyway this is what I've been told. You have ex-convicts, you have sex offenders,*
perception of increased risk	HL4	*"would it be easier for them if they live in the street and the things secured, would it make it easier for them to get into other people's houses"*

6.3.3 Theme C: Physical, emotional and temporal resources in a transient neighbourhood

There is a perception that the area does not have adequate resources to support either the current or hoped-for future population. This section presents the resources and under several categories and analyses them in terms of the perception of their adequacy. Bisecting these categories are concepts of present and future resource demand. In some instances, perceptions connect lack of resources to certain behavioural, aspirational and emotional consequences.

6.3.3.1 Retail resources

Only one shop, one café, an off-license and a dry cleaner are identified within the Holyland (see illustration in Figure 6-8). The nearest major retail area is Botanic Avenue, where there are abundant food and entertainment outlets. Some licensed premises and off-sales are on the Ormeau Road that bounds the west of the Holyland, and would serve the student population also.

There is an impression that there is a certain unfairness to the distribution of the shops in the Holyland, with one participant saying of the shop owner:

> *I think he's a monopoly; he probably owns a lot of the houses too, the same boy-o* (Participant HL2 , 2016)

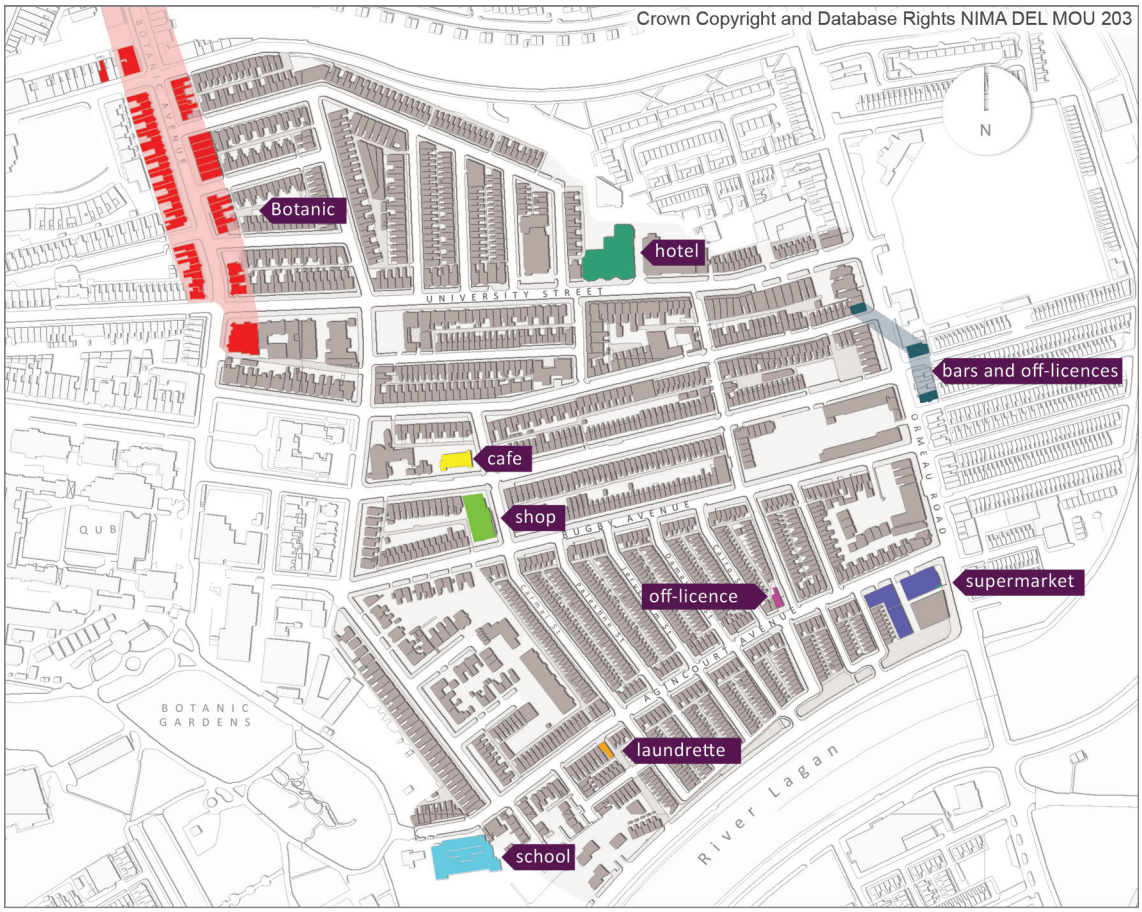


Figure 6-8 Map (nts) showing commercial resources within the Holyland area

The supermarket marked in blue to the east of the map is an ethnic supermarket selling mostly Asian and other non-local foods, which is due to relocate in late 2018. Several other ethnic bakeries and shops are clustered nearby. Undoubtedly, the location of these shops here reflects the high density of BME residents and the relative inter-connectedness of the Ormeau Road to the rest of South Belfast. These ethnic shops are not used much by students. A student representative (HL5) who has lived for many years in the Holyland expressed the understanding that, "…isn't that sort of international down there?" meaning that these retail resources are not recognised as serving local students' needs. There is an off-license, a shop and a bar on the main Ormeau Road which are used by students but serve a wider residential

area also. This section of lower Ormeau Road has not generally benefited in a retail sense from its proximity to high-density student population (with the exception of off-licences and bars) due perhaps to its identity as serving the existing Lower Ormeau community.

6.3.3.2 Outdoor spaces

There is a shared sense of lack of outdoor space. The lack of open space for children to play as well as for recreation was cited numerous times by stakeholders. Botanic Gardens, a large well maintained park lies just to the west of the Holyland and provides outdoor space, a children's playpark, playing fields and other resources. Despite this provision, there appears to be a perception of need for more localised open, private or semi-private space for families and children to play closer to their homes as well as for students to congregate socially. The map below in Figure 6-9 is a figure-ground analysis showing the densely built streets of the area with no gaps for outdoor shared space.

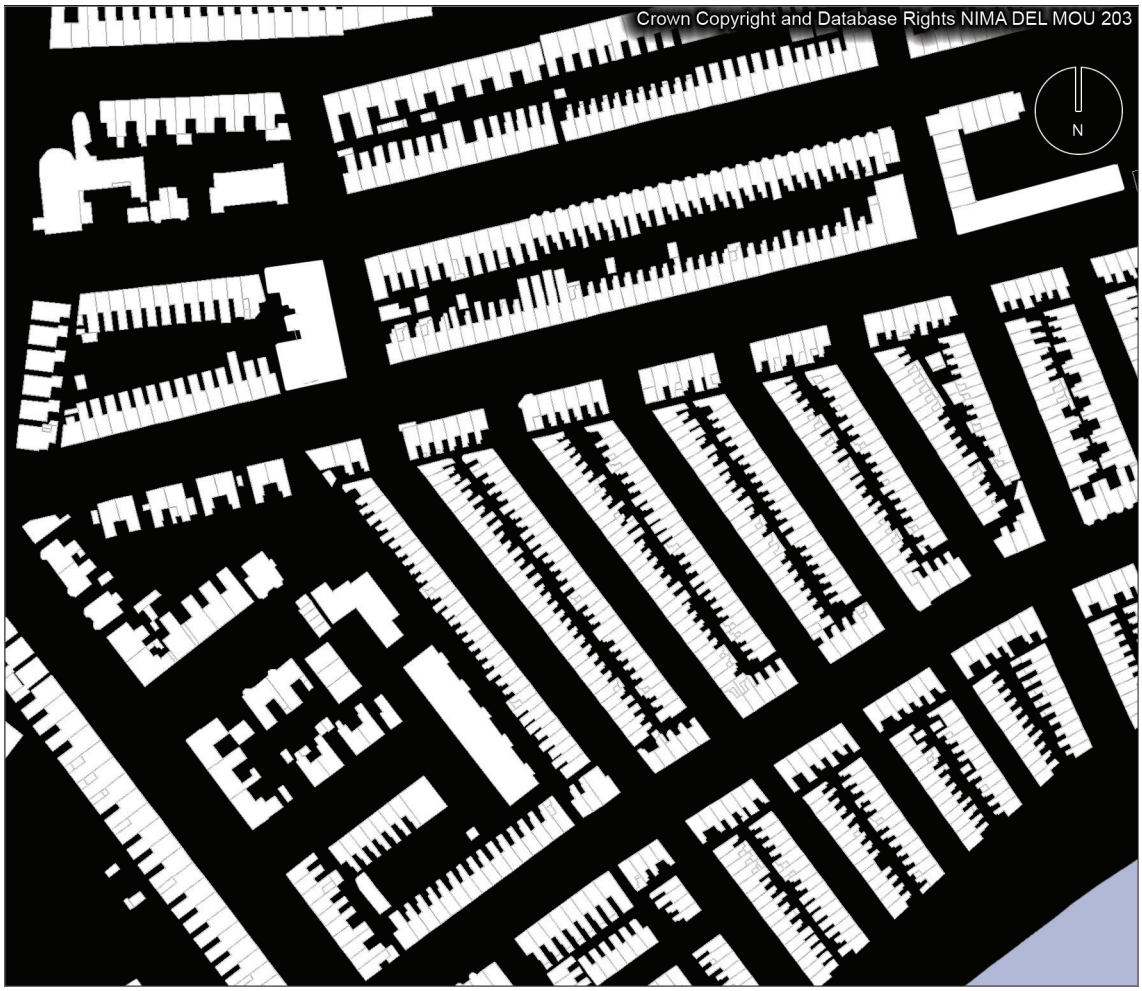


Figure 6-9 Figure-ground map (nts) showing relationship between built and unbuilt space in Holyland

There were numerous perceptions that there was not enough outdoor space, as can be seen in Table 6-8 below. Each stakeholder that mentioned it had a different perception of the use or function of the space, from children's play space to student recreation, from private to shared.

Table 6-8 Perceptions of lack of outdoor space for a variety of purposes

code	*who*	*quotation*
Lack of play space	HL1	*There's no play park, there's no safe play space.*
Lack of community space	HL2	*that great carpark and we don't have anywhere for children to play and its being allowed to sit there which would be a fantastic community resource.*
Small gardens	HL3	*I can't put [my toddler] out in the garden to play either*
Lack of recreational space for students	HL5	*There's no real park other than this one here*
Lack of green spaces	HL7	*the environmental issues in terms of the lack of green spaces*

A participant identified perhaps the only open space in the area (see map in Figure 6-10 for location) which is adjacent to a disused office building and is currently in use as a privately rented car park.

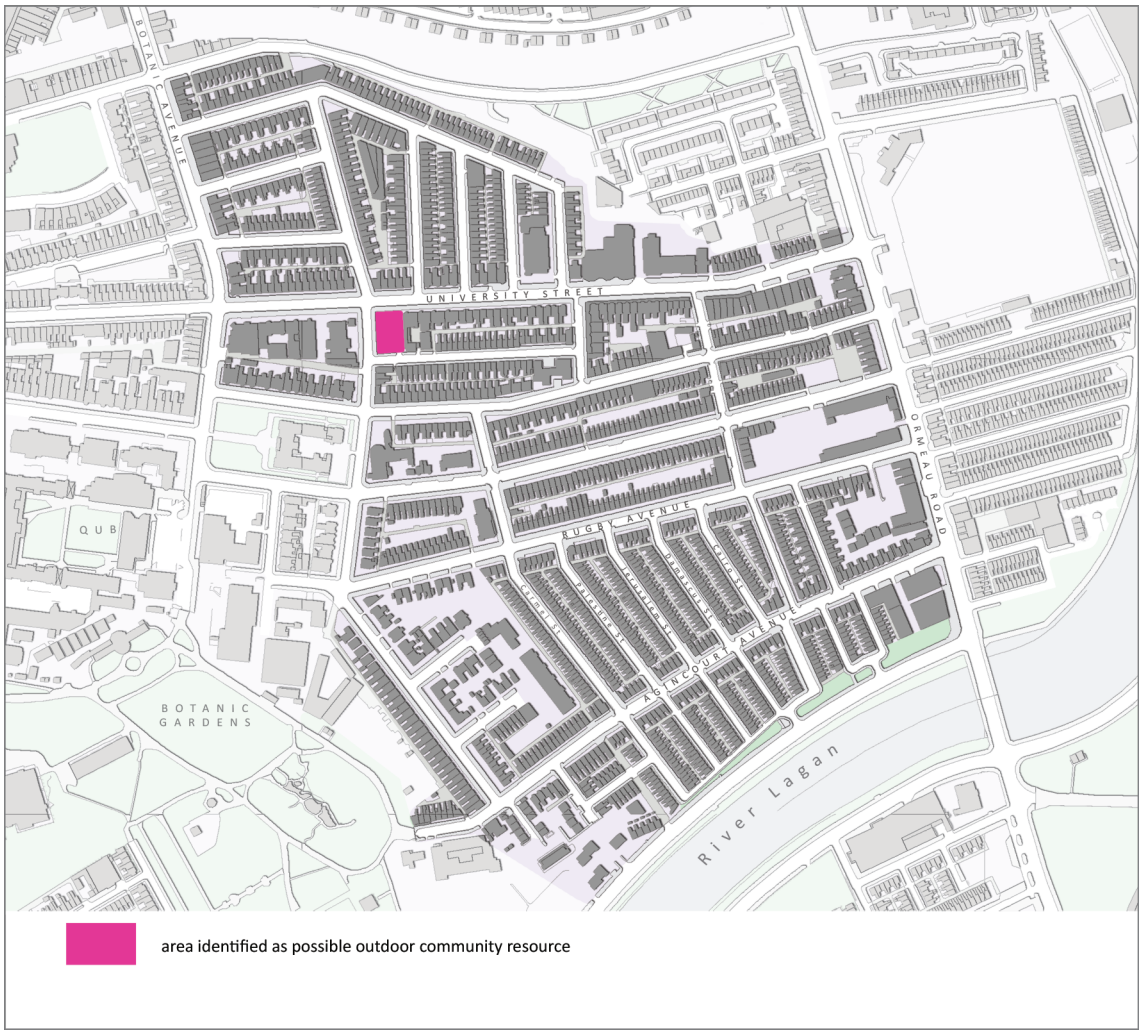


Figure 6-10 Map (nts) showing location of possible outdoor space

It is in this context of a lack of private or semi-private public space that Wildflower Alley emerged as a community garden. This alley, to the rear of houses on College Park Avenue, University Avenue, Carmel Street and Rugby Avenue - the more southern of the two marked in red in Figure 6-11 below - was claimed by owner-occupying residents when alley gates were installed. The other space marked in red is a community garden project run by the City Church which is located on the corner of University Avenue and Carmel Street.

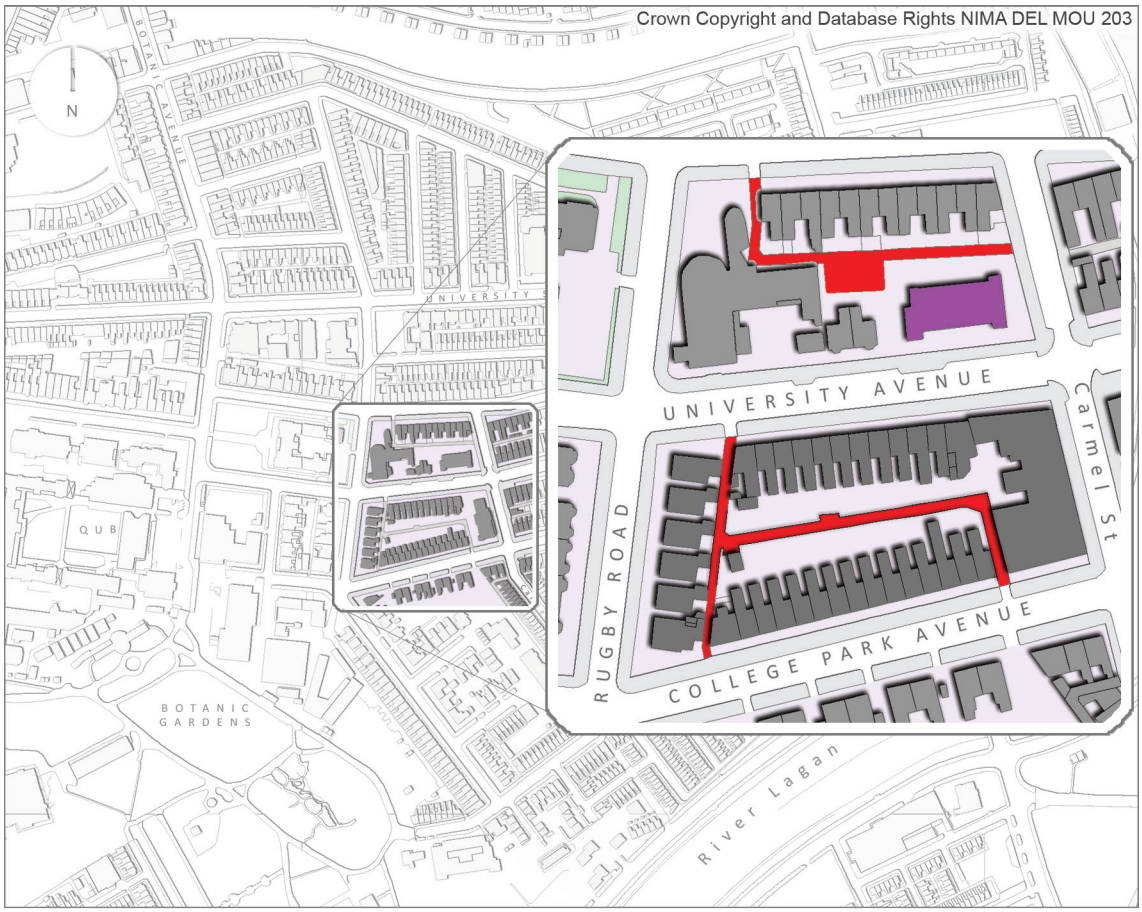


Figure 6-11 Map (nts) showing location of Wildflower Alley and community garden

Wildflower Alley was gated in response to residents' concerns about anti-social behaviour in the alley and the high levels of burglary. Working with the Council, the residents devised a collective refuse collection system which removed the need for individual wheelie bins. This freed up much space in the alley. Some painting, cleaning and greening of the space was done and the character of the previously neglected space was transformed in to a pleasant, welcoming semi-private shared space (see photograph in Figure 6-12).

Figure 6-12 Photograph of Wildflower Alley (before SUDS was installed)

The Wildflower Alley project represents a positive community initiative from grassroots activism which bridges the differences between residents and seeks to make a common ground for all. It has received much positive public attention and media interest, and recently secured funds to resurface the alley so that it acts as a Sustainable Urban Drainage System (SUDS). Similar projects are appearing elsewhere, notably a few hundred meters to the east at Rutland Street on the other side of the Ormeau Road.

6.3.3.3 Spaces to gather, internally and externally

A number of references to the way people gather in the public space were recorded. The first two quotes here make a connection between the available internal social spaces in HMOs and the use of outdoor spaces, suggesting that if there was more communal internal space available, behaviours that are experienced as disruptive might not occur externally.

> *..the way the houses are carved up as you say like there's bedrooms everywhere and you walk into somebody's house and you're walking straight into their kitchen. I think that definitely tends to sort of beckon students out into their front gardens where they'll maybe take the sofa out and then that then is like the broken window theory where you know if one person does it then people just think well nobody seems to care and then that brings them out into the street* (Participant HL6, 2016)

Additionally, a participant attributed the students' use of street space for recreation, in particular ball sports, to the lack of shared space in within their accommodation:

> *and it's partly, that's why they're out in the streets playing hurly at three in the morning* (Participant HL4, 2016)

The lack of social space is perceived as contributing to the desire to socialise elsewhere, hence the "looking for a party" phenomenon that is observed regularly, and mentioned here:

> *They're coming back here [from bars] to the Holyland and they're trying to find parties* (Participant HL3, 2016)

> *...in the evening when they're starting to head down to the clubs then you'll get them and the thoroughfare there for that* (Participant HL4, 2016)

The noise disruption late at night caused by the inebriated young people as they pass

through the streets of the Holyland is a wicked problem for residents in that they cannot attribute it to a particular household, event, time or individual and therefore are not able to seek recourse. This transient revelry was identified in one interview as the main cause of noise disturbance, and was mentioned at several public, PACT and community meetings by residents as a cause of anxiety and disruption.

6.3.4 Theme D: Overcrowding and HMOs; when the spatial and becomes the emotional

While the high density of the population is discussed in detail elsewhere, this section focuses specifically on the emotion relating to living in and near to high numbers of HMOs as well as overpopulation in the area.

The main social, economic and behavioural issues associated with HMOs, as identified by the Welsh Government in a recent report (2015) are summarised well in the following quotation:

> *Damage to social cohesion with higher levels of transient residents and fewer long term households and established families, leading in the long term to communities which are not balanced and self-sustaining; access to the area for owner occupiers and first time buyers becoming much more difficult because of increased house prices and competition from landlords, with a reduction in the number of family homes; increases in anti-social behaviour, noise, burglary and other crime* (Welsh Government, 2015)

All of these issues mentioned above have arisen in the Holyland and can be attributed to high density living due the density of HMOs and other rental properties. The negative impact of overcrowding in HMOs in the Holyland are well known and not confined to the effects it has on those residing in HMOs. Residents observe

first-hand, and other stakeholders second-hand via their professional and personal interactions with residents, the associated social psychological and spatial issues around overcrowding. Beyond the more palpable consequences of increased noise and higher demands on parking and waste management, participants articulated their perceptions of the more complex implications of living and working in a HMO-dense area.

The map in Figure 6-13 below illustrates the density of HMO properties registered in October 2016 in the heart of the Holyland. Note that in some streets such as Carmel Street, the percentage of properties with HMO status is over 80%. The average density of HMOs across Belfast is 2.3% per dwelling, based on homes statistics (Department for Communities, 2016a) and HMO statistics (NIHE, 2016).

The density of occupant capacity per property n HMOs in e.g. Carmel Street is an average of 3.65. Given that these are small terraced houses typically with only two bedrooms, these figures reveal the true density of non-related residential occupancy in the area.

Figure 6-13 Map (nts) showing HMO density in the 'heart' of the Holyland. Author's own based on data sourced in October 2016 from (NIHE, 2016)

A number of residents and other stakeholders made reference to the lack of social space afforded to students in their rented accommodation and their perception that this was linked to psychological and behavioural issues. Typical HMO properties in the area are two or three-storey terraced houses with a sitting room and kitchen on the ground floor and bedrooms and bathroom upstairs. It is common practice for landlords to convert former sitting rooms into additional bedrooms in order to increase rental value. Houses refurbished and converted into apartments often have

no communal space other than small kitchens. As can be seen in the indicative plans in Figure 6-14, the front ground floor rooms of many of the small terrace houses in the area are rented as bedrooms, leaving only a kitchen and small dining area for three or more tenants to socialise in(bedrooms numbered and coloured red). In some houses, there is another floor which is used as bedroom space, increasing this ratio of bedroom-to-living space further.

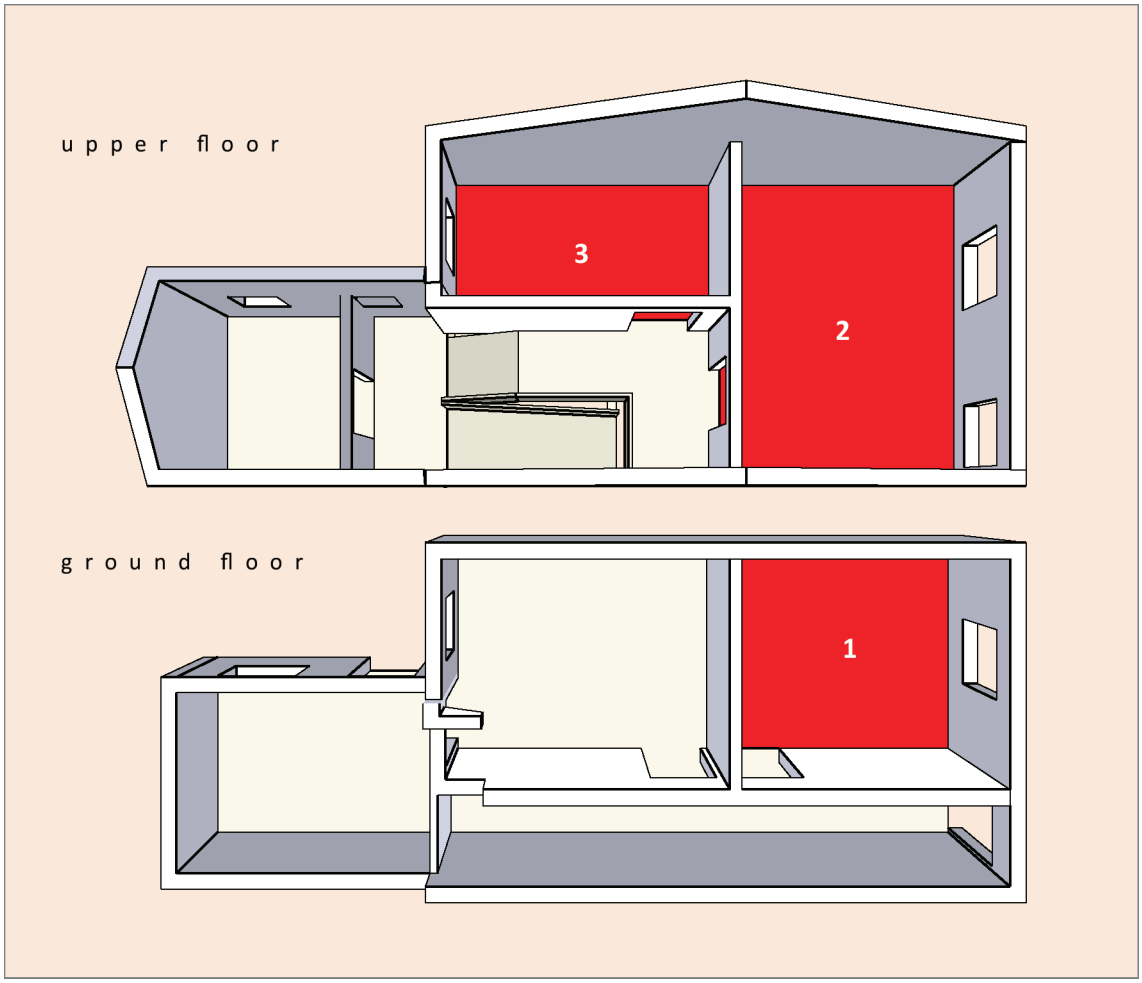


Figure 6-14 Layout of typical 2up - 2down terrace

This lack of social space is perceived as having an isolating effect on students who live together. A connection between the isolation experienced in these HMOs and student mental health was perceived by a participant who had a concern that there

was a high, if under-reported, student suicide rate in the area:

> *These are not young people with long term mental health problems. These are tipped over the edge and I think the living environment contributes* (Participant HL1, 2016)

This same participant also felt there was a connection between the cramped living conditions and social isolation.

> *the houses .... would have had a living room. Those living rooms are now divided into two and two bedrooms so there's no social space so people in there are very, very isolated* (Participant HL2 , 2016)

6.4 Conclusion

The following chapter will look in more detail at how SpatialGT performed across all the studies, but here a brief conclusion of this case study is presented. The two key purposes of this conclusion are:

- to summarise the findings of the data analysis
- to evaluate the extent of research saturation

Through SpatialGT the lived experiences of stakeholders in the Holyland were captured and represented in maps and a clear, accurate and contemporary snapshot of the consequences of contest, the obstacles to engagement, the existing and needed resources and the impact of high density living in the area was made. Emotional mapping in the Holyland gathered and represented some of the key issues for residents and decision makers.

There is a strong sense among all stakeholders that things will change due to the expansion of Ulster University in the city cetnre. In most discussions in public and

private meetings and interviews, this change is seen as positive in social terms, given that the status quo is so contested. It has repeatedly been referred to as an opportunity to change the area for the better, transforming it into a well-integrated, multi-cultural, family-friendly neighbourhood. The lack of certainty about the future of the Holyland brings dread and hope for some stakeholders.

Research saturation, discussed previously in *3.3.7 Research saturation* on page 82*,* refers to the stage at which SpatialGT has been thoroughly applied and tested within a given context. In order to assert research saturation at this stage, it is necessary to revisit the research objectives as well as some key methodological targets. Objectives 1-3 (see page 11) have at this stage in the thesis been wholly addressed and Objective 4 - *Assess the potential impact/utility/usefulness of SpatialGT* has to a large extent been broached in that a body or data is gathered and can now be tested further. The remainder of the empirical work is therefore focussed on completing Objective 4 and addressing Objective 5, which is to *make recommendations on future academic and decision-making discourse*. For this reason, it was decided that the final study would not test the procedural aspects of the methodology further, but focus on the potential for informing policy. It is called 'reflective' because it reflects on the work already carried out in the two test studies. By presenting the mapped outputs, along with a verbal presentation of discursive findings to key decision makers, the author sought to gauge a pragmatic sense of the usefulness of the research in real-life settings.

Chapter 7 Reflective Study using SpatialGT

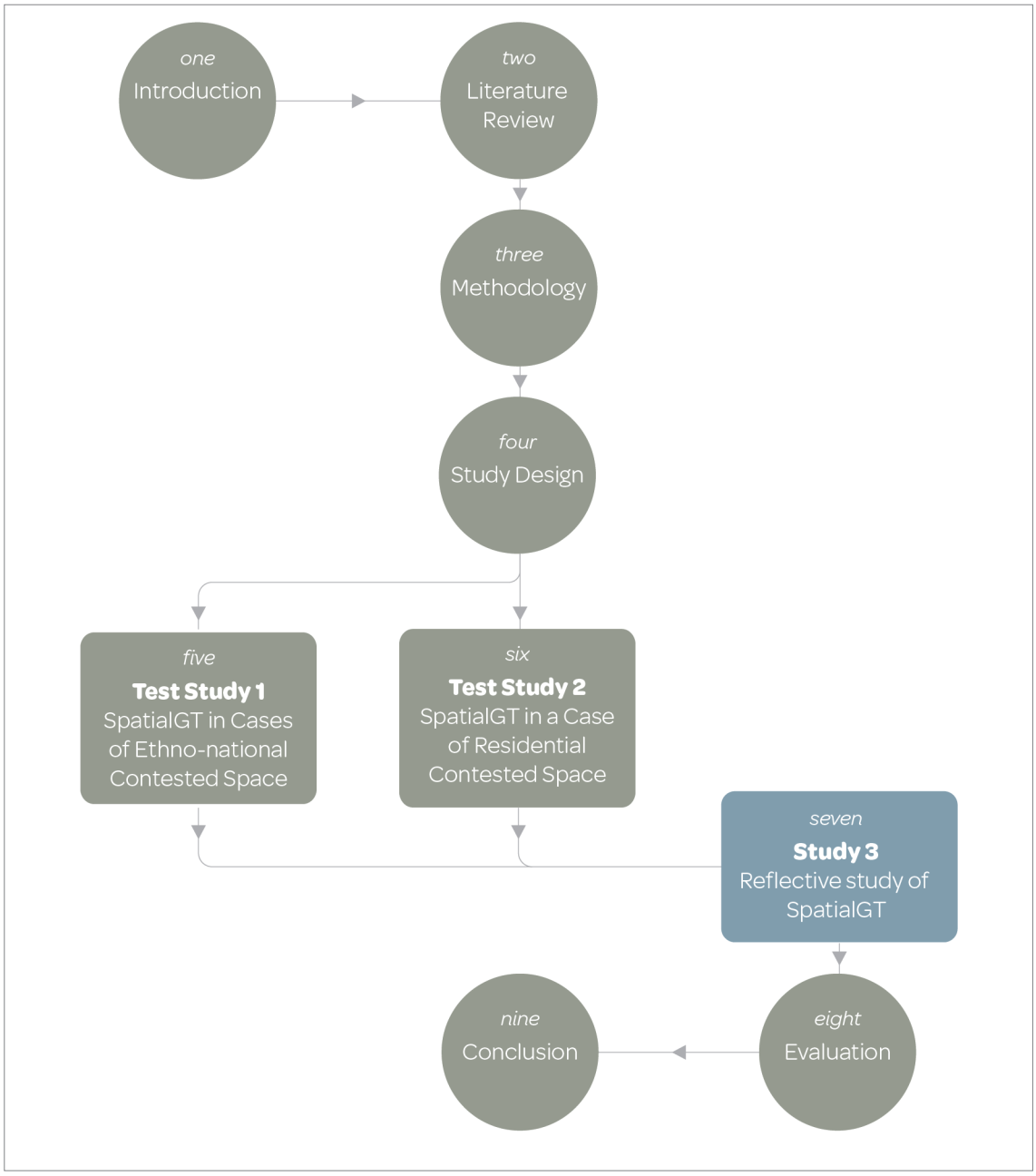


Figure 7-1 Diagram showing all thesis chapters (vii)

7.1 Introduction

This chapter frames the final reflective study in the context of the thesis and gives a detailed account of the analysis of the data and findings. Methodological procedures

are located in *Chapter 4* under *4.4 Study 3 - Reflective study* on page 147. As illustrated in Figure 7-1, together with Chapters 5 and 6, this chapter deals with the empirical work of the thesis.

Using a process of exhibiting mapped outputs alongside a verbal presentation of the research conducted in the previous studies, the quality, fit and possibilities therein were triangulated with the input of senior decision makers and mappers in the built environment in Belfast. By this method, an additional layer of interpretation was added to the research outputs, further strengthening their validity.

The diagram in Figure 7-2 is an excerpt from the thesis map presented in the introductory chapter. As can be seen, all three studies come to bear on Objective 4 which seeks to **assess the potential impact/utility/usefulness of SpatialGT**. This chapter is however concerned primarily with the first part of Objective 4, that is, assessing **quality, fit and possibilities of the mapped and discursive outputs in decision making**. The second part of Objective 4 requires a broader consideration of the methodology, its mechanisms, its strengths and weaknesses etc. which is covered in *Chapter 8*.

Figure 7-2 Excerpt from thesis map showing reflective study in relation to objective 4

7.2 Reflecting on the maps

Policy decision makers were invited to share their opinions on the relevance of mapped and other graphic outputs from the previous studies. Just as the previous studies had *experts* who knew the areas, the issues and the people well enough to guide the research, in this study the decision makers were considered the experts. Their knowledge of policy procedures and information validity in their respective areas is by any measure expert. For this reason, their opinions were sought on the outputs of the test studies.

Semi-structured interviews were conducted with officials employed by public

organisations that help to make policy and decisions on the built environment. In most cases, the organisations deal directly with the sites studied in the previous chapters. Sampling for this stage of research was on the basis of an organisation's influence on policy in the built environment. Individuals to approach within the organisations were identified on the basis of their professional roles and capacities to make or inform decision making around policy. In the case of two of the participants, their specialist knowledge of GIS and its role in decision making was a key factor in seeking to speak with them. Most of the interviews were conducted in the workplaces of the participants and lasted no more than 45 minutes. In all cases, participants announced at the outset that they were not speaking on behalf of their organisations. It was assumed though that they were bringing to bear their knowledge, experience, expertise and professional judgement in interviews.

7.2.1 Decision making structures

As of May 2016, the Northern Ireland Executive consists of eight departments as well as the Executive Office, as illustrated in Figure 7-3 below.

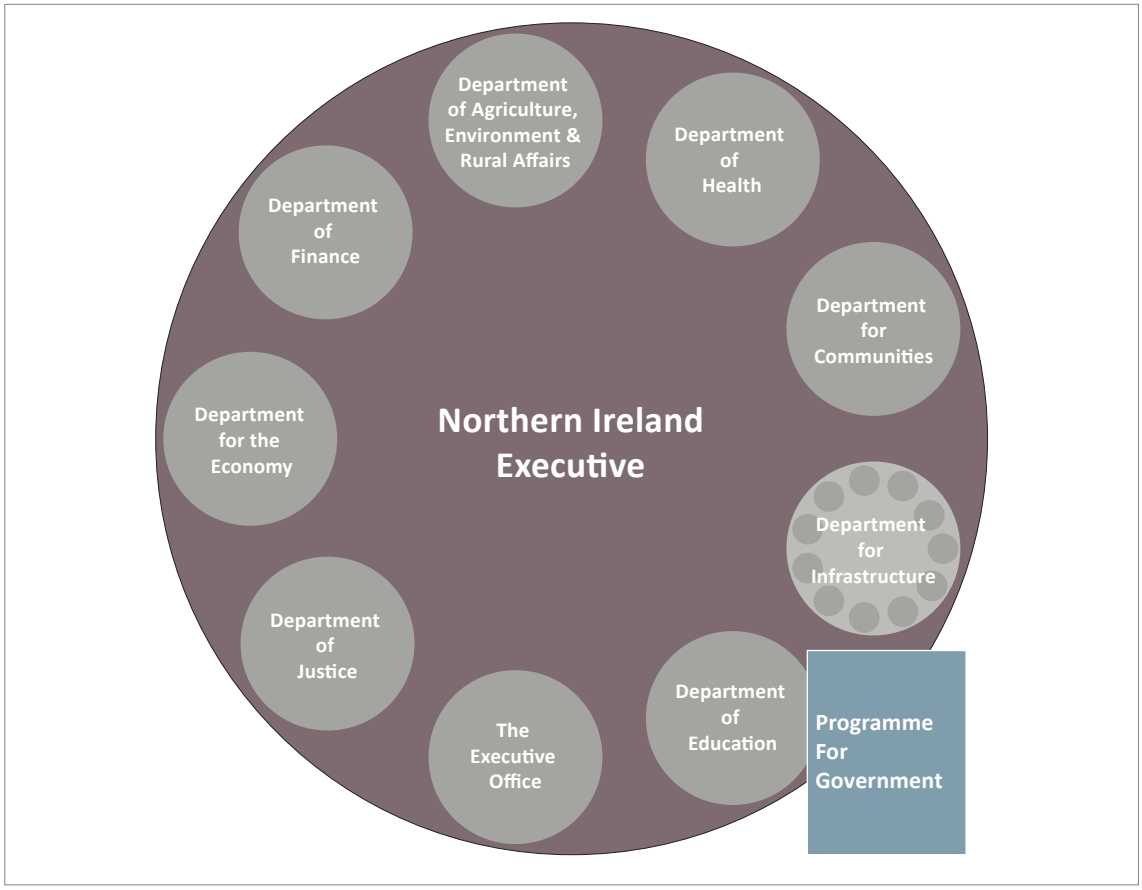


Figure 7-3 Eight government departments in the Northern Ireland Executive

The overarching *Programme for Government* (Northern Ireland Executive, 2012) lays out the key commitments to which all departments adhere. At the next level, as illustrated in Figure 7-4 the Department for Infrastructure (DfI) makes strategic decisions that affect the planning decisions that are devolved to the eleven councils. Regional policies such as the *Regional Development Strategy, (RDS) (*Department for Regional Development, 2010) and the *Strategic Planning Policy Statement (SPPS)* (Department of the Environment, 2015) are formed at this departmental level and lay out the framework for local government decision making.

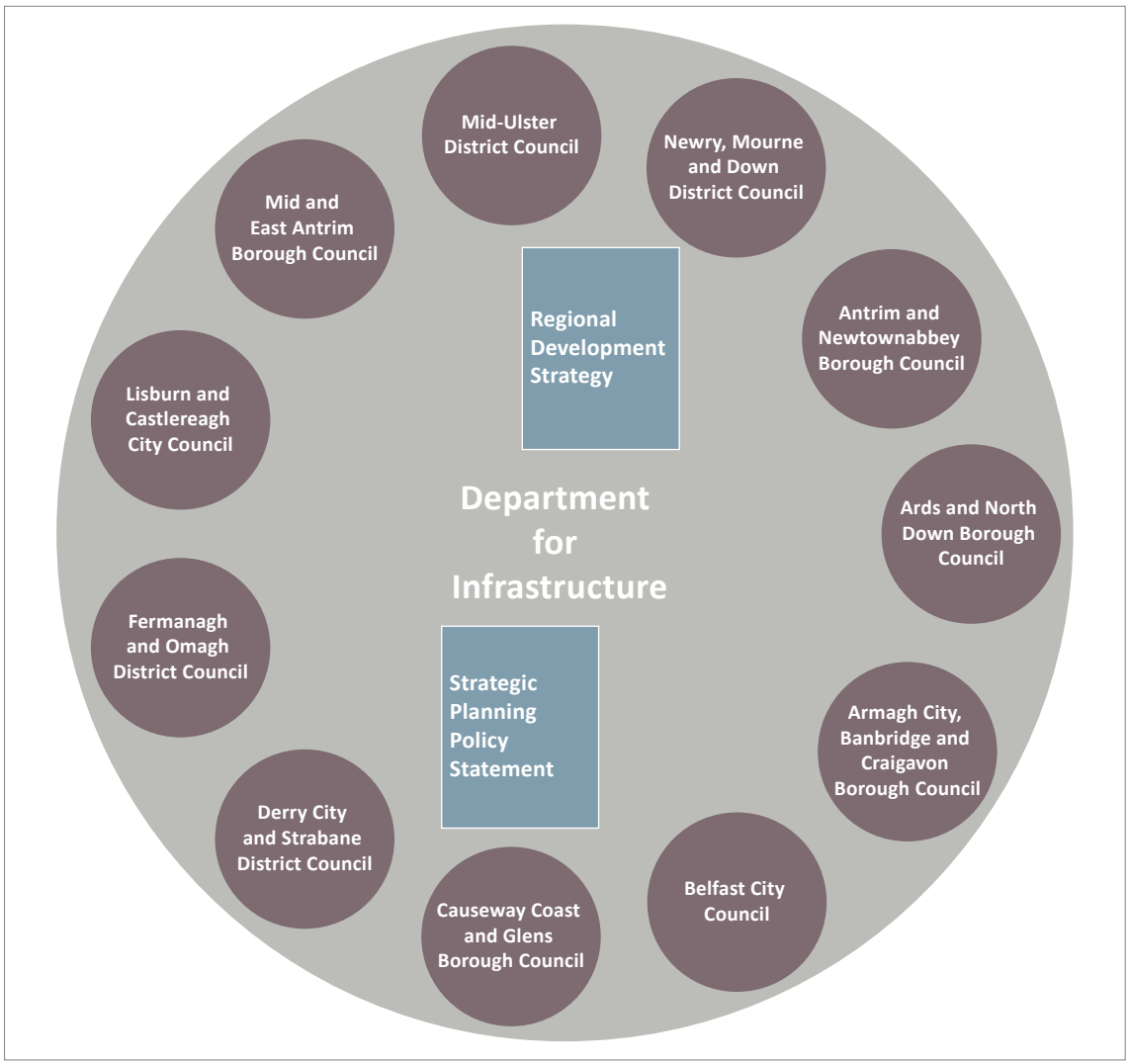


Figure 7-4 Planning powers devolved from DfI to 11 councils, with main strategy documents

At council level (see Figure 7-5), local development plans, such as the Belfast Agenda (Belfast City Council, 2017) - out for consultation at time of writing - set out the vision for change in respective councils. For Belfast, that vision is built around the priorities of; growing the economy; living here; city development and working and learning. Within the constraints of these strategic frameworks, planning departments also produce supplementary planning guidance on particular topics such as car parking, cycling or Purpose Build Student Accommodation, as

illustrated in the example.

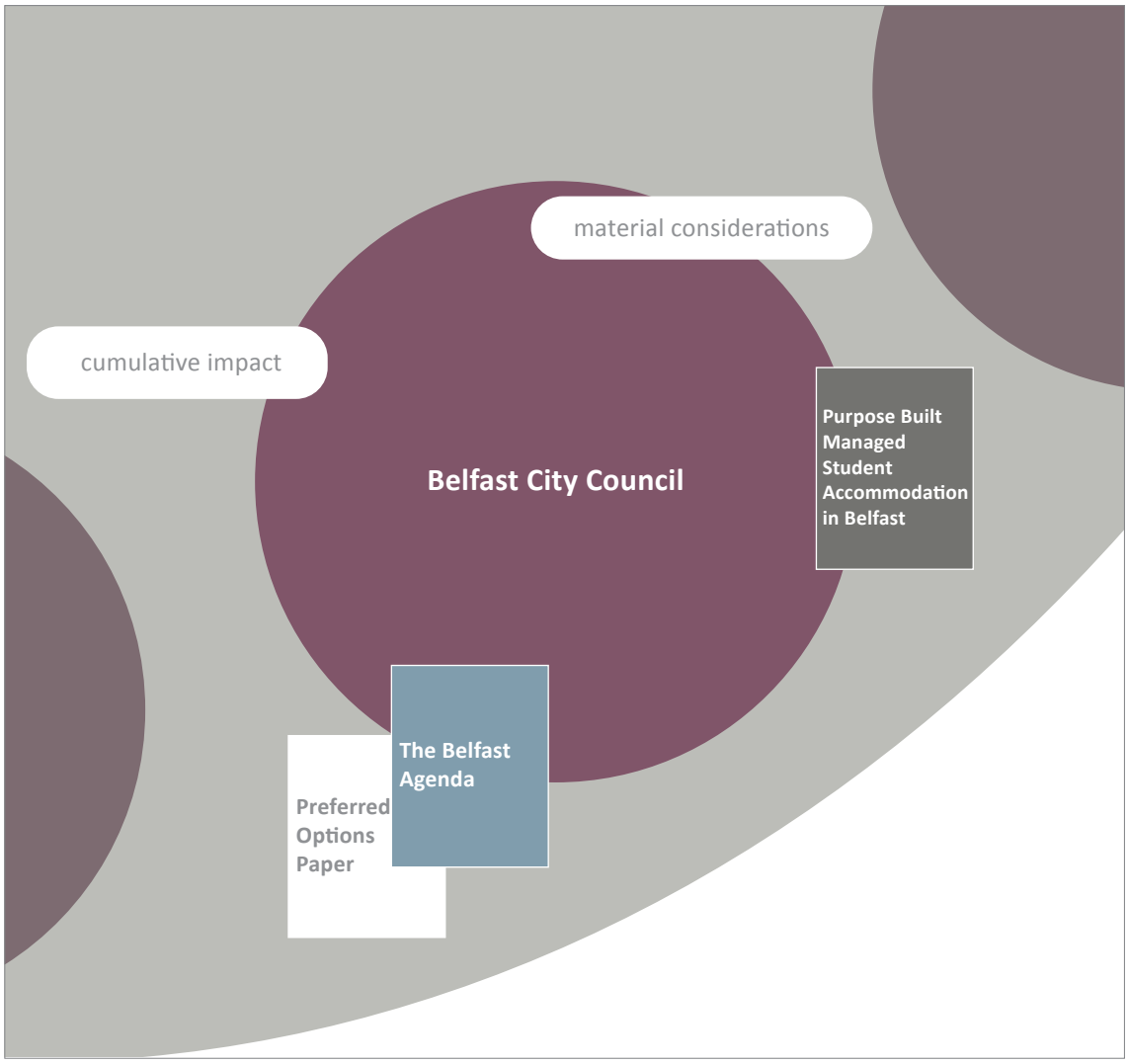


Figure 7-5 Belfast City Council planning context

This background information to the structures of decision making and policies around the built environment in Belfast is presented here as a context to the reflective study and to position participants in their level of decision making.

7.3 Findings

7.3.1.1 Analytical framework

Data analysis in this study differed slightly from that in the previous studies in that, as stated above, no new mapping was carried out. Spatiality and mapping were still very much the focus of this study, but new data was 'about mapping' as opposed to 'in' or 'on' mapping. The analysis here is therefore more aligned with a traditional GTM approach of open, axial and selective coding. These codes focussed not on participants' own relationship with the places and spaces discussed and mapped but on their perceptions of the mappings, mapping practices and discursive outputs (hear-after collectively referred to as *outputs*). This structured approach is often taken in qualitative analysis and traditional GTM where a particular phenomenon is explored. For example, Guzmán-García et al. (2013) - a pilot study employing Grounded Theory - identified the two central themes of 'enjoyment' and 'benefits' around which their model of understanding of the impact of a dance class for people with dementia was built, an approach suggested by Corbin and Strauss, two of the original proponents of Grounded Theory Method (ibid., p.525). In this reflective study, the key objective was to evaluate various aspects of the outputs in a given setting, namely policy decision making. It was therefore necessary to devise a framework of several scales. Firstly, at the scale of the *object*, research outputs were accessed for constitutional *quality*, that is, how successfully they communicated, how appropriately they represented and how clearly they illustrated their content. At the second, contextual level, the relationship between outputs as discreet entities and the given context is explored, under the rubric of *fitness*, that is, the technological, philosophical and pragmatic suitability SpatialGT as a means to create knowledge

in an evidence-based arena. The third level of the framework wraps around the second and explores the perceived possibilities of SpatialGT beyond the decision making context. It is here that future directions, recommendations and perceived obstacles are located. This analytical framework is summarised in Table 7-1 below, listing the sub-themes to each of the three levels. This imposed structure differs from the previous studies, where their analytical framework was based solely on themes as they emerged directly from the emotional and spatial data.

Table 7-1 Analytical framework for reflective study

scale	*theme*	*sub-themes*
object	quality	appearance, representativeness, legibility
context	fitness	alignment to tenets of decision making, usefulness, technological practicability, impact
external	possibilities	recommendations, obstacles

The diagram in Figure 7-6 is a variation on the coding diagram on page 81 in *Chapter 3* in which the emotional codes and those relevant to the test studies are replaced with the sub-themes of the *outputs.* (It should be noted that this digram is indicative and does not show the actual locations of codings across transcriptions). As can be seen the coding process is the same as before but there is a significant difference in the nature of the language and types of codes. This is perhaps what fundamentally distinguishes this study from the previous two; it is a meta-analysis of previous findings.

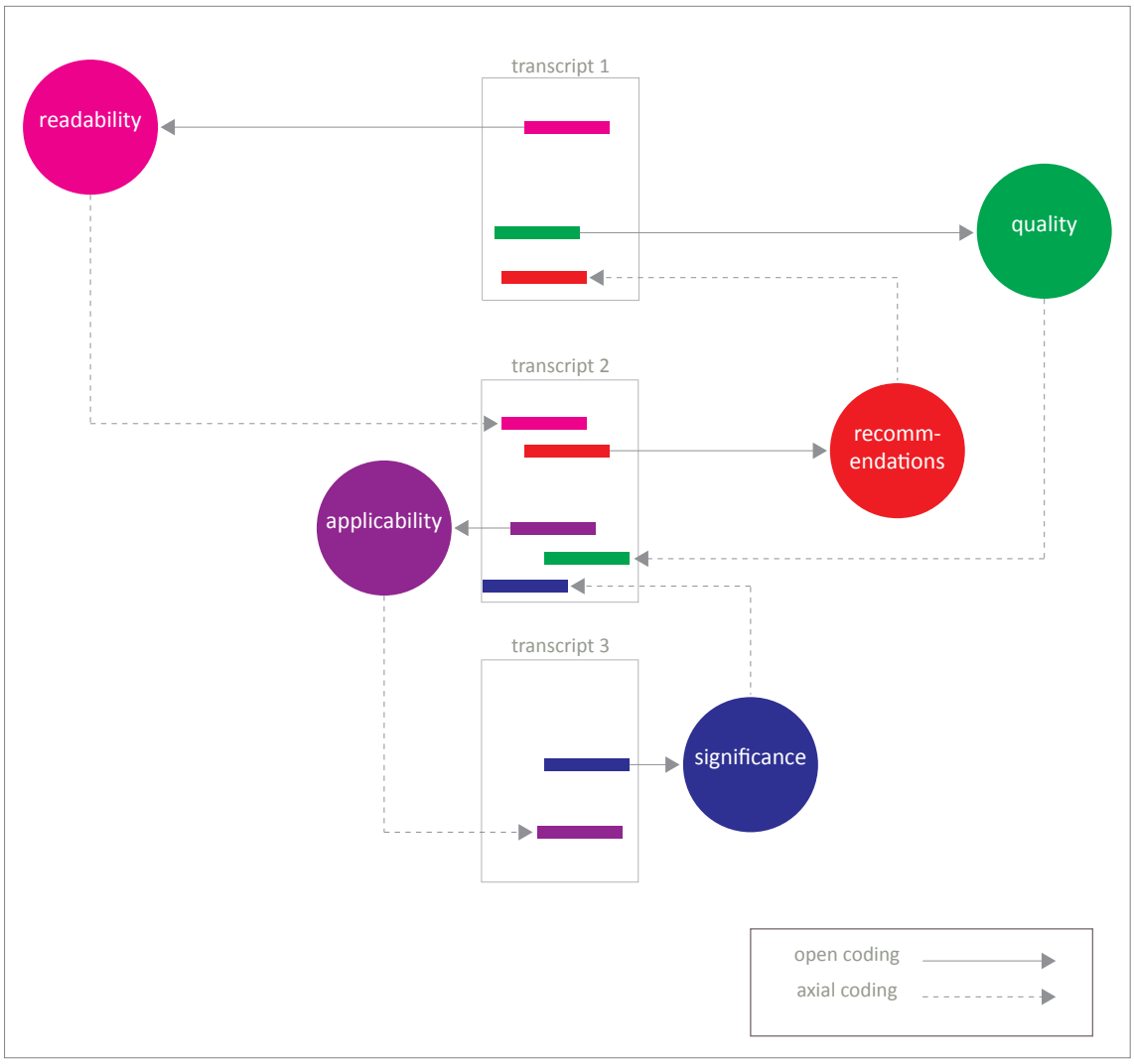


Figure 7-6 Open and axial coding in reflective study (author's own)

The following sub-sections present analysis of each theme, using examples from the data gathered to construct an understanding of quality, fitness and possibilities of outputs as a means to validate the studies. As will be seen, there is considerable overlap between sub-themes and themes. Where multiple codes overlap, it sets up interrelationships between the codes. This dimension of the analysis is considered in the conclusion of this chapter.

7.3.1 Quality

Three aspects of quality: appearance, accuracy and legibility are assessed in detail in this section. As can be seen in Table 7-2, the work was well received.

Table 7-2 Excerpts from transcriptions relating to overall quality

participant reference	*excerpt*
R01	*I think you're breaking new ground*
R01	*So, it's fascinating what you're doing*

7.3.1.1 Appearance

The following comment refers to a subjective assertion of the visual quality of outputs.

> *Some of your maps are absolutely fantastic, the 3D stuff and basically some of this reimaging stuff as well. (Participant R07, 2017)*

Participant R08 reflected on the graphic design of the maps, and saw a strong compatibility between the raster outputs and industry standard ArcGIS (Esri, 2017a). As discussed previously, Photoshop (Adobe®, 2017c) and Illustrator (Adobe®, 2017b) were used to produce the maps. It was suggested that their production in Photoshop did not make them any less GIS than if they had been produced in ArcGIS.

> *GIS at its simplest is just information that are layered on each other you know? You've done (that). You say that your maps aren't really GIS, they're Photoshop - it is GIS. What you've done there is GIS. You didn't use a software package to do it, you didn't use Esri products to do it but you've done it (Participant R08, 2017)*

7.3.1.2 Accuracy/descriptive validity

Digital GIS processes can appear to have a degree of accuracy, when they represent objective, quantifiable data. The accuracy of emotional, subjective mapped outputs of the test studies- or 'descriptive validity' in the language of qualitative research quality benchmarking - is less measurable. Descriptive validity, discussed in detail in the next chapter, is a key element of the overall research validity. It has been interpreted as closely aligned with the accuracy of mapped outputs. Participants in this study were not able to attest to output accuracy given that they were not familiar with the datasets. However, the process by which data was inscribed onto mappings was explained, which in several ways has built-in mechanisms for maximising accuracy. These interpretative processes are discussed in detail in *Chapter 8*.

Despite the limitations of this study to assess descriptive validity, there was a general sense in all interviews that the outputs "matched" the process by which they were produced. Participants accepted and understood the mappings to be graphic representations of the data as described to them whilst also understanding the experimental nature of the mapping process and the inadequacy of some of the datasets.

7.3.1.3 Legibility

In all cases, mappings were considered readable. The intended narratives were communicated successfully, alongside verbal explanations in some cases. In one case though, the author became aware of her own assumptions about how familiar participants might be with ethno-national contexts of study sites; one of the participants had only lived in Northern Ireland for a few years and did not live in

Belfast. They had some questions about the extent of PUL and CNR neighbourhoods in Test Study 1, areas they had no prior knowledge of. For this reason, additional mappings have been produced and are presented below in Figure 7-7 and Figure 7-8 for Gunnell Hill/Serpentine Gardens and Lower Oldpark/Cliftonville respectively which convey the ethno-national division in simple coloured areas.

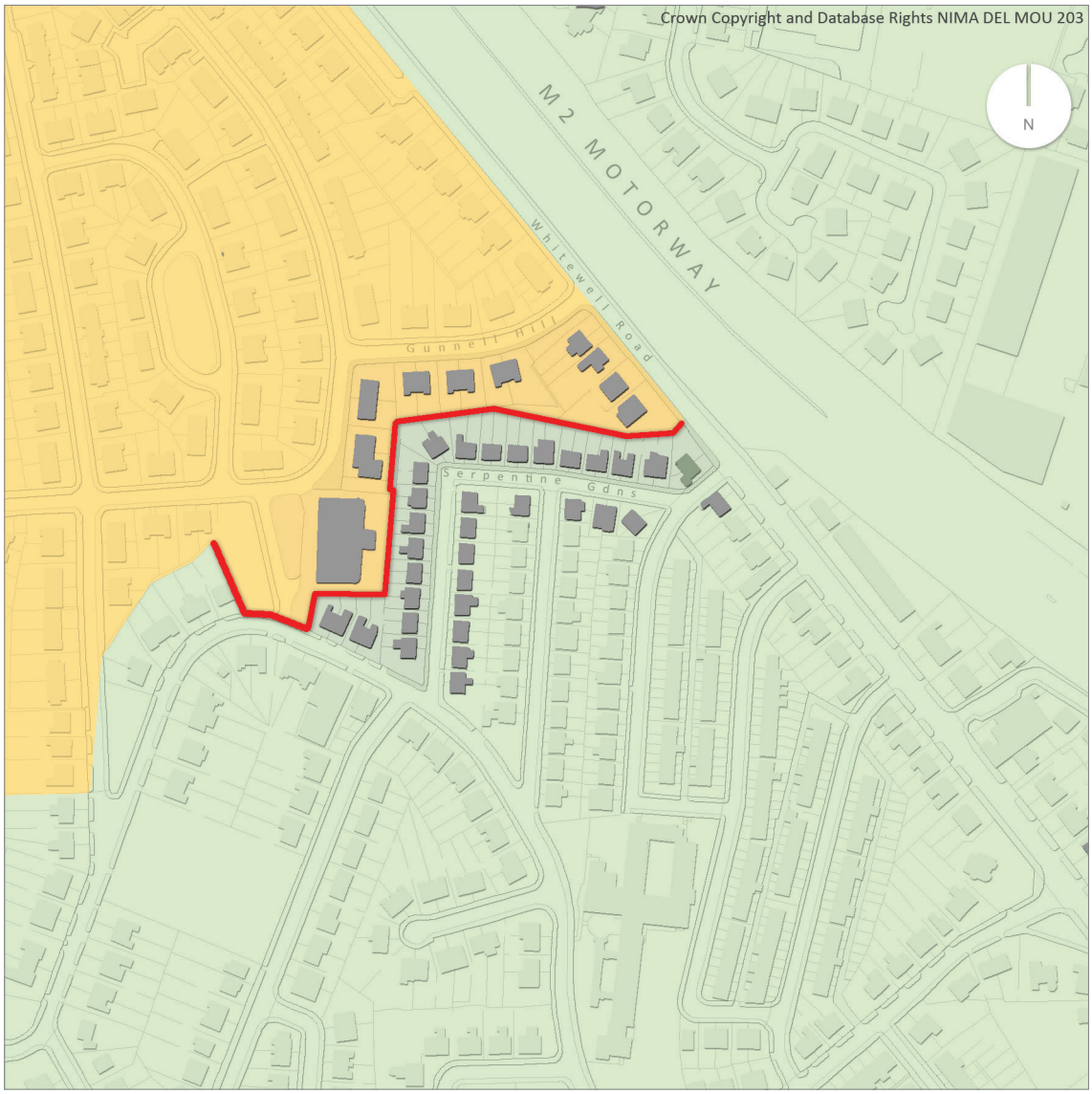


Figure 7-7 Map of Gunnell Hill/Serpentine Gardens (nts) showing CNR neighbourhood in green, PUL in orange and shared space in grey. Interface marked in red

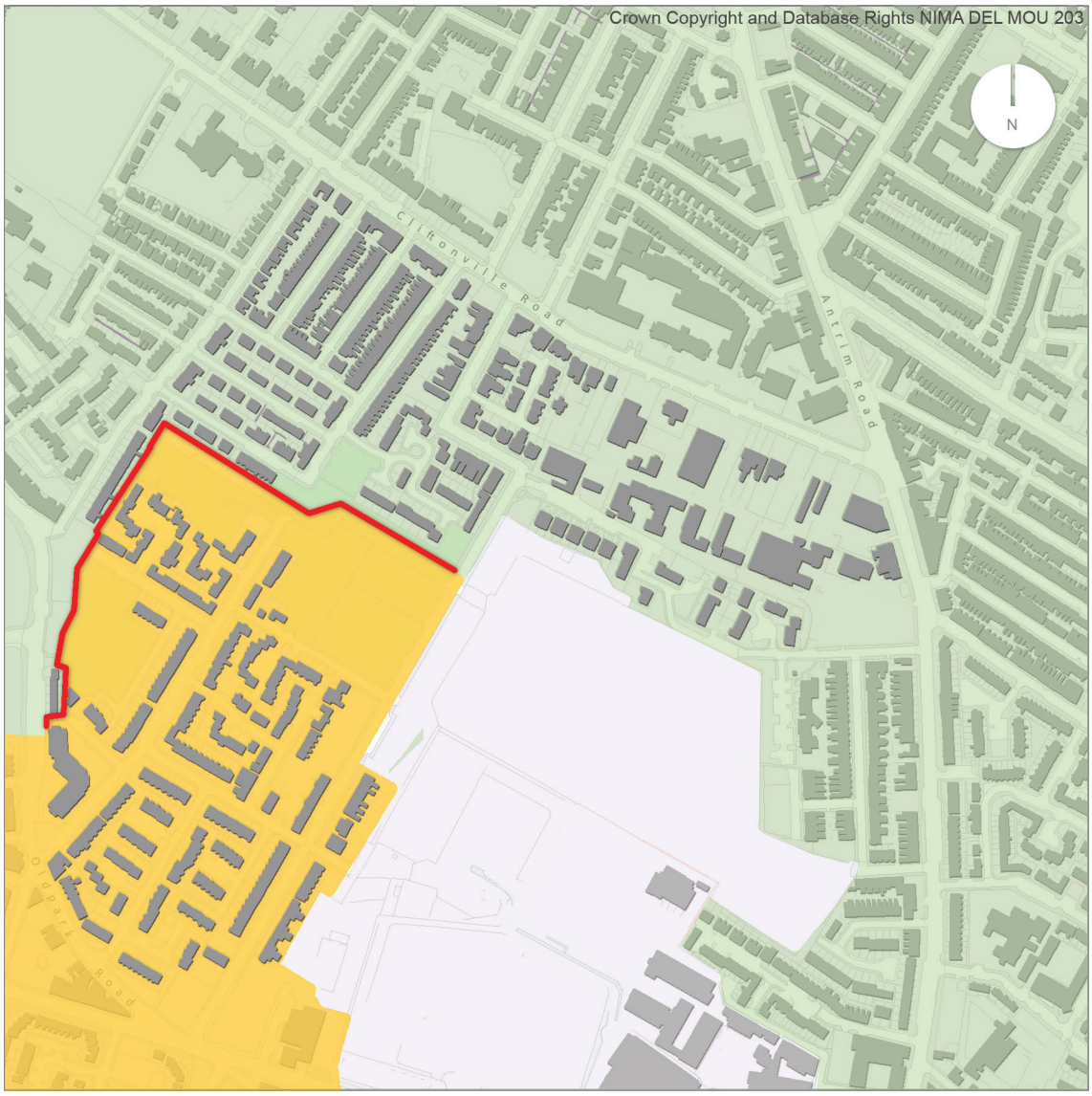


Figure 7-8 Map of Lower Oldpark/Cliftonville (nts) showing CNR neighbourhood in green, PUL in orange and shared space in grey. Interface marked in red

Such an oversight was a useful reminder to the author that when conducting research such as this which deals with the particular and subjective, close attention should be paid to the communication of all narratives, ranging from the individual to the more widely held. This example shows that the latter cannot be assumed to extend beyond a certain geographical area. There is perhaps a way of gauging the spatial range and other social conditions that impact such prior knowledge of ethno-

national identity. In the report *Attitudes to Peace Walls* two distinct geographic populations were sampled; "those who live adjacent to peace walls in Belfast and in Derry~Londonderry, and those who reside elsewhere in Northern Ireland" (Byrne et al., 2012, p.7) in order to compare how attitudes varied across these two geographic scales (and also numerous demographics). Given that this study sampled populations based not on their residential/commercial proximity to the contested spaces but on decision making and mapping expertise, here was an opportunity here to explore prior knowledge and assumptions, as well as underlying ethno-national or other biases.

Additionally, assumptions were made about participants' colloquial understandings of the issue of crime in South Belfast. In response, the following map was created using recent crime statistics from PSNI (Police Service of Northern Ireland, 2016). The Holyland lies within the wider PSNI Lisburn Road area (which covers most of South Belfast) and has proportionally high levels of burglary, criminal damage and arson and anti-social behaviour (Police Service of Northern Ireland, 2016) as highlighted in Table 7-3 below.

Table 7-3 Crime statistics for Lisburn Road district from January 2016 to December 2016 (data from Police Service of Northern Ireland, 2016)

Crime type	*Holyland*	*Lisburn Road*	*Holyland as % of wider area*
Anti-social behaviour	594	6,257	9%
Bicycle theft	6	289	2%
Burglary	161	937	17%
Criminal damage and arson	233	1,565	15%
Drugs	28	582	5%
Other crime	5	153	3%
Other theft	65	2,005	3%
Possession of weapons	7	115	6%
Public order	6	97	6%
Robbery	4	132	3%
Shoplifting	6	1,311	0%
Theft from the person	4	189	2%
Vehicle crime	28	561	5%
Violence and sexual offences	130	3,463	4%
Total number of crimes	1,277	17,656	7%

The map in Figure 7-9 below shows the relative geographic scale of the Holyland and Lisburn Road area, demonstrating graphically the significance of high crime rates in the Holyland.

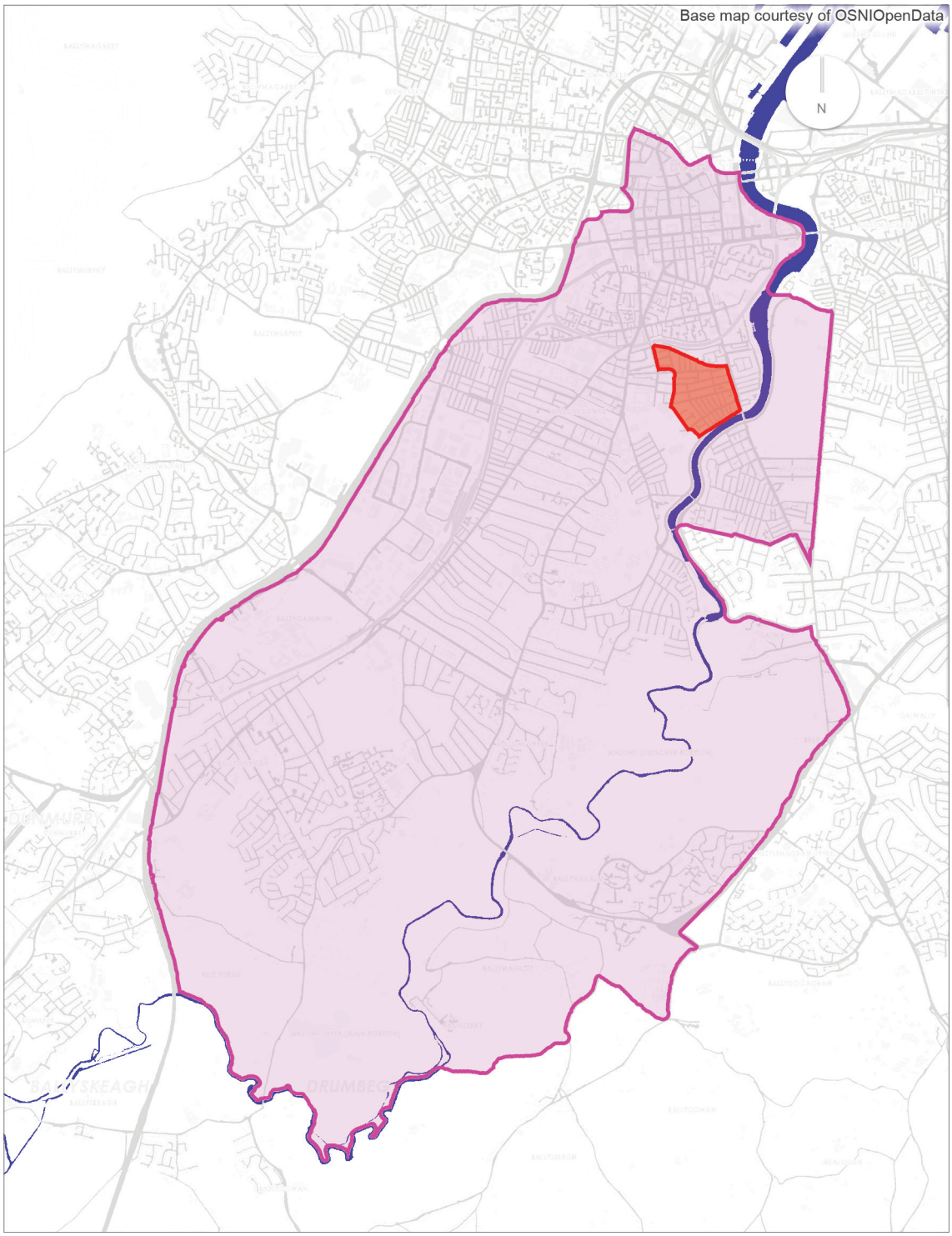


Figure 7-9 Map (nts) showing PSNI Lisburn Road area in purple and the Holyland in red

In summary, the mappings were considered, particularly by the GIS experts to be of a high visual quality, to be consistent with the discursive presentation on

mapping process and to be a clear, legible representation of urban spaces, places and key qualitative data. The visual format appealed to several of the participants as a communication and engagement medium. One participants attributed the "low levels of educational attainment" (Participant R04, 2017) within communities to the unsuitability of large written documents for engagement or educational purposes, and suggested that "If you can hand somebody a twenty or fifty-page narrative, creating half a dozen pictures, well what would you be doing? I know what I'd be doing, is to show the pictures" (ibid.).

Additionally, some general comments were made on the outputs and the description of the mapping process:

> *So, it's fascinating what you're doing (Participant R01, 2017)*
>
> *These mental maps and the perception of where people think they are residing and how they identify emotionally with space is fascinating (Participant R01, 2017)*

As mentioned above though, consideration should be made to the fact that participants had a professional - and not necessarily direct personal - relationship with the study sites unlike sample populations in the previous studies. Their perspectives on the emotional mappings was therefore potentially more academic and procedural as a result, and relating to a more general mapping lexicon and sensibility.

One implication for further study might that be an exhibition of the "final mappings" for viewing by test study participants and other interested community members . This could add additional reflection on the legibility, validity and appearance of outputs from a more intimate, emotional and less professional perspective. Another might be that information should be gathered on prior attitudinal positions and

knowledge of the issues such as the nature of contest, characteristics of contested populations/users and manifestations of contest particular to those sites (which in this thesis are summarised in Table 4-1 as well as geographic relationship to the site.

7.3.2 Fitness

As mentioned in the introduction to this chapter, the theme of fitness is concerned with the suitability of study outputs as evidence, knowledges or tools for aiding decision making. The key aspects of fitness explored here are *impact*, *usefulness*, *alignment to tenets of decision making* and *technological practicability*. As with emerging themes in the previous studies, these sub-themes might not conform in number, range or delimitation to traditional taxonomies of the central theme. The analytical sub-framework was not imposed, but instead, sub-categorisation of aspects of fitness emerged from analysis of emerging data. Open coding identified relevant excerpts and axial coding provided the correlations between codes, forming the basis of the sub-themes.

7.3.2.1 Alignment to tenets of decision making

This sub-theme explores the way in which emotional mapping conforms to or challenges accepted modes of decision making. The first statement in this section was hard to place in the analytical framework because it characterises aspects of numerous sub-themes such as impact and usefulness. The participant was considering the fit for emotional mapping in council planning decision making, in their capacity as Director of Planning and Place in Belfast City Council. They identified “material consideration” as an important characteristic of information.

> *the other phrase within the legislation is "material considerations" and it's the materiality of information that you're gathering as to whether or not we use that as a tool for measuring acceptability. (Participant R03, 2017)*

What is relevant here is that councils use a degree of interpretation when considering the materiality of information. The deliberative space here is highlighted as one in which emotional mapping outputs might appear to align with present planning processes. According to the Planning NI website material considerations must be "related to the purpose of planning legislation, which is to regulate the development and use of land in the public interest" (Department for Infrastructure, 2017). Some examples are given here, and listed below in Table 7-4.

Table 7-4 List of some material considerations as factors in planning decision making (DfI, 2017)

Need	Resources and Economic Factors
Power to impose conditions	Social and Economic Matters
Natural Justice	Precedent
Public Opinion	Alternative Sites
Consultations responses	Issues affecting Human Rights
Existing site uses and features	Planning gain
Layout, Design and Amenity Matters	The Planning History

Emotional mapping processes in the Holyland test study identified a number of issues - amenity, resources, social and economic matters and city-centre PBSAs as "alternative sites" for high-density student housing - that could conceivably be material considerations in planning consultations and engagement. The mapping of HMOs in the area gives striking materiality to this key aspect of the built environment, while maps addressing resources and open space concerns give an

equally clear picture of aspects of quality of life in the Holyland. It was demonstrated therefore that such outputs of emotional mapping processes giving shape to material consideration could perhaps be relevant in decision making processing in planning.

The statement below by Participant R03 explains the shift in decision making procedure from a deficit model (Sturgis and Allum, 2004) whereby experts have *sufficient* knowledge and users are *deficient*, towards collaborative co-production. This reflects a more deliberative approach as evidenced in the literature explored earlier (Davoudi, 2012; Fischer, 2010; Rydin,2007). The contemporary position is that those to whom the service is provided - in this case the tenants of the Housing Executive - are expert in their own needs as users, and therefore are supported to build capacity in order to set a complete, inclusive agenda. It then becomes the role of the provider - NIHE - to try to meet the requirements of this agenda. Due to the working class locations of much social housing provision, the needs of NIHE tenants are steered by social issues such as deprivation, poverty, unemployment, educational underachievement and poor physical and mental health as well as the particular socio-spatial challenges of segregation, sectarianism and the legacy of conflict:

> *It's gone from the early age of where, "Listen I know what's good for you believe me I'm going to give it to you", where then people started going, "Hold on a second who are you to tell me what's good for me". "By the way here's what I want from you" so we're in a much better space than that. (Participant R03, 2017)*

Participants from the DfC described an existing application of GIS that informs decision making in relation the location of shared housing thus:

> *we apply a one mile buffer zone. Within that one mile radius we would look for - it's in Annex B there - So, they're all plotted in and then we would look at that and then agree whether it should come onto the scheme or not (Participant R06, 2017)*

Annex B referred to here is part of a document given to the author during the interview by the participants which gave an outline of the shared housing initiative as part of the Together: Building a United Community (TBUC) agenda. Annex B identifies criteria for selection of shared housing locations as: relevant housing market, housing demand not dominated by one side of the community, history of good relations, local political, community issues and views, scale of development, proximity to removed/remodelled peace walls, proximity to Urban Villages or other TBUC headline projects, existing levels of segregation and contested space issues. There are, within this list of factors, quantitative and qualitative measures that are translated in to spatially distinguished intensities. This geo-located statistical data informs the spatial decision, but what informs the decision to cross-reference those particular factors? Most likely, there was an underlying interpretative, sense-making process whereby place makers saw patterns in behaviour, associations in territoriality. As articulated by Pavlovskaya (2006), the "always-assumed alignment of GIS with quantitative research has never been complete and the many openings in GIS enable qualitative research" (p.2003). It is proposed here that the mapping of qualitative aspects of lived experiences in areas such as shared spaces might help to complement - and even provide direction - to the existing quantitative mapping processes, by monitoring the underlying social, emotional issues in a rigorous way.

Additional excerpts relating to alignment are given below in Table 7-5. The first

describes the official status quo in planning decision making and the second refers to a need for more recognition of the incalculable consequences of segregation and its implications for planning.

Table 7-5 Excerpts from transcriptions relating to alignment

participant reference	*excerpt*
R01	*so those are the hard facts and all of our decisions, all of our policy framework are based on evidence and soundness*
R04	*I think as a profession, planning has begun to recognise more that it can't just take a very technocratic approach to those sorts of issues. There needs to be recognition and I think there is increasingly recognition.*

7.3.2.2 Usefulness

Usefulness here refers to the ways in which emotional mapping might be used by decision makers and explores the areas as well as the means by which it might be implemented. In many cases during interviews, the usefulness of emotional mapping was stated by participants. There were instances however, when it was identified that the current decision making structures do not allow for the consideration of the kind of knowledge that emotional mapping reveals. For example, the Director of Planning Policy in the DfI suspected that at the high level of strategic policy creation, the outputs would have little usefulness. It was acknowledged though that recent academic and political interest and openness to issues around contested spaces has had a significant impact on regional planning strategies, in particular with regard to shared space policies. On a more reflective note, this participant did identify the importance of paying attention to spatial perceptions in contested spaces:

we've a role to play and that space and place is - in Northern Ireland

> *particular - much more closely defined into those sorts of contested issues, and people's perceptions and views, and the community's perspective on what they want for their place, which we need to actually be more upfront about confronting (Participant R04, 2017)*

The initial observation here echoes the position seen in traditional planning policy and documented by Gaffikin et al. (2008). Additionally, this quotation asserts that perceptions, perspectives and views on place are relevant for future for research and policy making. The mechanism for the integration of these alternative knowledges into existing evidence frameworks is unclear though, but exploration of such mechanisms would perhaps be a natural extension of this research.

Another participant saw the usefulness of emotional mapping at Gunnell Hill, stating:

> *I think it's really useful work and you could actually find quite a good application for this as you move forward. It would help understanding. (Participant R02, 2017)*

Similar to the previous participant, this person saw the value of engaging communities in the gathering knowledge of the lived emotional experiences of residents *prior* to the setting up of policy processes, as they went on to explain:

> *It would have been really handy to have when we established the six Building Successful Community areas. It would have been useful to have this type of interpretation of the characteristics of the community from the outset. (Participant R02, 2017)*

Having occurred in two separate interviews, these mentions of the importance of qualitative knowledges prior to strategic or policy development seems to be a particular aspect of usefulness worthy of note.

Another participant, the Director of Landlord Services in NIHE also commented on the usefulness of the outputs:

> *I could see this being very, very useful. It's just how it's managed, how it's run and how it's maintained and then reported. (Participant R02, 2017)*

Again here though, questions rose about how emotional mapping could be integrated or "managed" within the existing deliberative process.

There is an overlap between this sub-theme of usefulness and more technological, procedural characteristics as discussed in the following sub-section. Additional comments are presented below in Table 7-6. Participant R02 recognised the inherent difficulty of the task of capturing emotion, as they had personal experience of trying to engage diverse communities in relation to the built environment, and Participant R02 expressed a keen interest in seeing how emotional mapping could be explored further.

Table 7-6 Excerpts from transcriptions relating to usefulness

participant reference	*excerpt*
R02	*Well it would be very useful because it's an extremely difficult thing to do*
R07	*It would be really interesting to kick it off.*

7.3.2.3 Technological practicability

This sub-theme emerged in response to discussion with participants who are GIS consultants about the technological context and possibilities of the emotional mapping process and outputs. They considered and suggested existing GIS infrastructure that was capable of collecting, aggregating, analysing and mapping information about how people feel about an area. One participant thought that GIS

- in particular online interactive GIS systems, or webapps - could build on the outputs and create new mappings:

> *GIS can provide, you've got the platform there for doing that. So public participation, GIS citizen participation GIS, it would be very easy for us and we do have the infrastructure there to create a web map or web mapping application (Participant R07, 2017)*

Another mapper suggested that Story Map (Esri, 2017b), an online mapping tool, could provide a suitable technological framework for this work:

> *you can create these things called Story Maps and though that kind of thing would be so appropriate for what you're doing. (Participant R08, 2017)*

A brief exploration of Story Map was prompted by this analysis. The platform combines mapped/graphic content with written content online in a clear and user-friendly way. It seems that Story Map would be a suitable platform for the dissemination of emotional mapping outputs. Further exploration of this is required, and is discussed further in *Chapter 8*.

The maps presented in interviews and in this thesis were produced in Photoshop, with some additional work, such as text labels added in Illustrator. Base maps were scaled to fit onto A3 and/or A4 and shaded to provide visual distinction between buildings, roads, green areas etc. using solid fill layers with masks, as can be seen in Figure 7-10. In this example, the base map was a digital map sourced from LPS. Street, road and place names were added to provide key reference points and a "hue/saturation" layer was placed on top with the study area extents delineated with a mask. Subsequent mappings were built on this base map and where possible,

maintained the same scale and size for continuity.

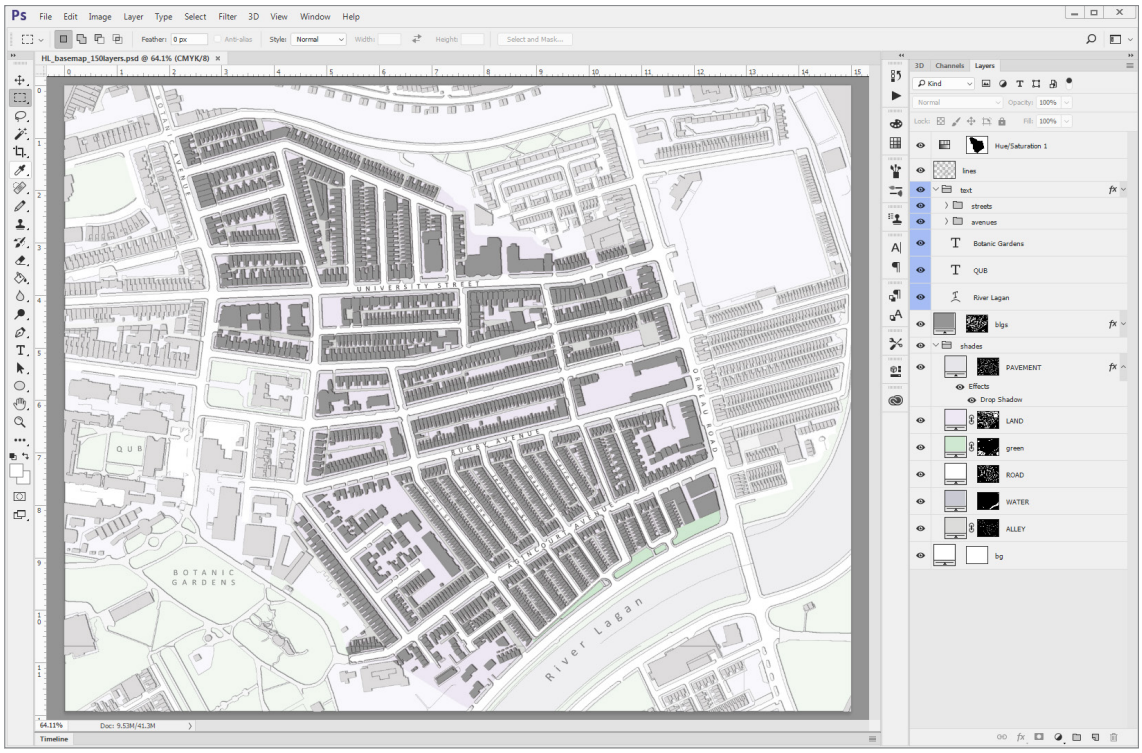


Figure 7-10 Screen capture showing layers of Holyland basemap in Photoshop

In some cases though, for example the HMO map in Figure 6-14 on page 228 extended only to a smaller area at the "heart" of the Holyland. This was done for the sake of time efficiency, as the cross-referencing and shading of each individual HMO building was laborious and time-consuming in a raster software package such as Photoshop (Adobe®, 2017c). The construction of an initial iteration of this map in ArcGIS would have have been no less time-intensive. This HMO mapping did prove to be an important mapping in interview process as it helped to visually communicate the density of such rental properties. Extending of the geographic area of this type of map is certainly worth consideration, and could prove a valuable tool for ongoing discussion, consultation and lobbying by concerned Holyland residents. Datasets for HMO statistics across NI are updated yearly and are freely available online. For future purposes, it may be beneficial if, time and resources permitting, a

complete ArcGIS version be set up which could then be reused for each subsequent iteration. Such a GIS vector map would also allow for spatial analysis such as distribution and density comparisons.

7.3.2.4 Impact

Impact is defined here as the capacity "to make a difference to practice" (Walker, 2016). In addition to, and overlapping with, the sub-themes of "fitness" presented above, participants saw impact potential, suggesting how outputs could help change processes, behaviours and ideas. One of the most significant perceptions of impact was expressed in the following statement:

> *an early indicator that you need to go in and maybe start having educational programmes around cultural diversity and stuff like that there. You know so it would act as a catalyst to do a lot of other work which would probably save money for government down the line. (Participant R06, 2017)*

In this excerpt, the participant made a connection between the capturing of attitudes and emotion and resource management as a means to employ government funds more efficiently. It would appear by this reckoning that emotional/attitudinal information (in this example, referring to threat in relation to the influx ethnic minorities in some areas) could perhaps have a measurable, mappable impact in pre-emptive training and awareness raising. Elsewhere, the capacity for emotional mappings to effect change was identified thus:

> *once you have these ... soft interpretations or soft perceptions ... and you put them on a web application ... That will definitely inform them quite well in terms of making them think of things that they haven't thought of before (Participant R08, 2017)*

The quotation by Participant R02, 2017 introduced earlier under "usefulness" that stated that emotional mapping outputs would have been "really handy to have when we established the six Building Successful Community areas". (Participant R02, 2017) referred to a DfC initiative which aims "to use housing intervention as one of the main catalysts for local regeneration" (Department for Communities, 2016b). In *Facing the Future: The Housing Strategy for Northern Ireland* (Department for Social Development, 2012) there is a commitment to identify and support these Building Successful Communities (BSC) through a range of initiatives. The criteria by which these six BSCs were chosen (Equality Commission for Northern Ireland, 2015, p.11) are: significant levels of empty properties, available undeveloped land, areas which have experienced a decline in housing demand, blight, stigma attached to the area, high levels of vandalism and anti-social behaviour, areas of deprivation such as Neighbourhood Renewal Areas and Areas at Risk and proximity to places where there is housing need. These criteria in the main are based on quantifiable, mappable datasets, with the exception of 'stigma'. Evaluation of stigma is not elucidated in the documentation, but it must be assumed that a qualitative method is to be employed. Participant R02 recognised the potential impact of emotional mapping outputs, specifically the "type of interpretation of the characteristics of the community" as an additional, qualitative knowledge that could have made a difference in decision making.

Another area of impact highlighted was at the council planning level, whereby cumulative impact, a concept related to environmental impact assessment, might be broadened by considering emotional or perceptual effects as having the same cumulative quality.

> *it may well be you know that sort of work will help us to talk about impact; cumulative impact in a land use. (Participant R01, 2017)*

Traditionally, cumulative impact is associated with visual density of e.g. wind turbines and telecommunications masts, structures in the landscape whose spatial density might not present a planning or environmental challenge. The cumulative impact relates to a more subjective, or aesthetic, experience of the combined proliferation and scale of the individual elements. The participant discussed how a cumulative impact argument was successfully used to limit the number of "To Let" signs in a student rental area in England, and made the connection that other aspects of the environment that fall under planning or other governmental policy functions might be challenged or protected by this mechanism. Perhaps there are physical manifestations of ethno-national, residential contests that might be seen to have a comparable cumulative environmental impact.

7.3.3 Possibilities

The possibilities for the research are here understood to be the ways in which participants perceived that its outputs might or might not extend beyond the intended arenas of decision making and public engagement in contested space. This theme has sub-themes - recommendations and limitations - which represent the positive and negative, the hopes and the concerns for those possibilities.

7.3.3.1 Recommendations for further work

Recommendations were made by participants in two ways. Firstly, they identified other fields where the research might have impact and secondly, how selected mappings might be further extended to encompass more spaces, more content and

more scope. They are summarised thus:

- DoJ
- Social policy
- Longitudinal studies
- Extension of comment-wall analysis across all peace walls

Table 7-7 below contains some excerpts in which participants suggest that emotional mapping might have impact on DoJ and/or social policy decision making. It was recommended there would be interest and potential for uptake of mappings at interfaces in the DoJ. Unfortunately, despite considerable efforts, the author was unable to interview representatives from that department. As discussed in previous chapters, the DoJ own and maintain many of the peace walls and have an Interface Programme Board. As a member of that board, one of the participants who is the Director of Planning Policy for the DfI thought that the outputs would be of particular interest to this Board.

Table 7-7 Excerpts from transcriptions suggested impact in DoJ and/or social policy

participant reference	*excerpt*
R01	*You're talking to me as a planner in a local authority, are you talking to other policy makers? I mean in terms of social policy, in terms of social integration which you know is a sort of mantra for one of the three pillars of sustainability so you look at social inclusion and trying to develop that through the community plan and through the local development plan but you're going to quite a wide audience presumably.*
R01	*Is that something that might be useful to Department of Justice for example rather than look at the whole portfolio as one homogeneous type of structure?*
R04	*No it is actually very interesting because I'm the DfI rep on the Department of Justice Interface programme board.* *Which is looking at all of this and I know they would be very interested in this.*
R06	*I'm sure something like this presented to the DoJ, ... know this is something that maybe we need to start doing. We need to start to gauging change or find out what degree it's been done*

Participants representing the DfC - which owns much of the land adjacent to peace walls - were enthusiastic about the possibilities of emotional mapping on a longitudinal scale as a means to test attitudinal change in a spatially recorded way.

Table 7-8 Excerpts from transcriptions making recommendation for longitudinal study

participant reference	*excerpt*
R06	*you're looking at attitudinal change ... But it would be a longitudinal thing rather than just going in now and again ... Every year people know that we're going to come in to the community, we're going to do a survey*
R07	*the concept of a longitudinal survey using GIS really quite an interesting one. You'd need to kick it off sooner rather than later obviously.*
R06	*Yes and also it would be interesting to find the degree of change that they would be willing to accept*

One mapping stood out as being most interesting or potentially useful. This was the 3D map reproduced here in Figure 7-11 for ease of reading.

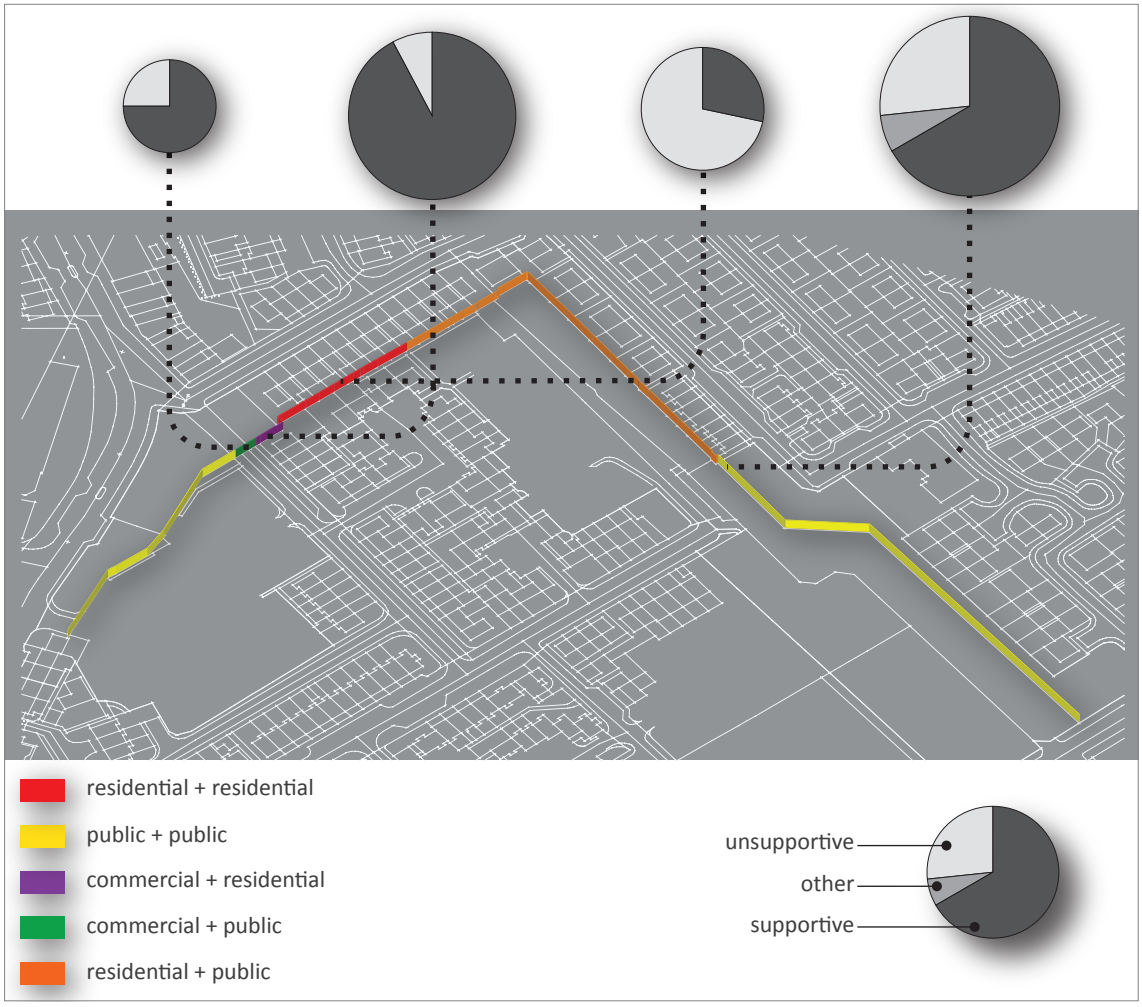


Figure 7-11 Comment - wall analysis (base map Crown Copyright and Database Rights NIMA DEL MOU 203)

This graphic, produced in the analysis stage of Test Study 1b, illustrates comments on proposed changes to the interface barrier at Lower Oldpark/Cliftonville overlaid on a spatial analysis of the wall in terms of land use. In most of the interviews conducted in the reflective study, participants saw a significant value in this analytical process. Further comments relating to this the comment-wall analysis are compiled in Table 7-9 below. As can be seen, these participants identified the possibilities of creating nuanced readings along interface barriers on a scale of contentiousness, as well as the bringing together of interrelated quantifiable and

qualitative data.

Table 7-9 Excerpts from transcription relating to comment-wall analysis

participant reference	*excerpt*
R01	*...to connect the perceived and emotional with the spatial and in this case land use and saying well is there a lesson there to be learned? Do we have to go and analyse all of the peace walls in terms of their land use and think about what parts are less contentious and which parts are.*
R08	*I do think there is actually a really good place for GIS in your [work] having this visual representation ... of A. You have the quantifiable wall but then you have B. The kind of shifting perceptions around those walls and a map demographically. (Participant R08, 2017)*

The particular power of this mapping is in that it not only brings together two vastly different datasets and proposes a correlation between them but it does so alongside three-dimensional analysis, in a graphic that is easy to read and understand. The possibilities for this combination of 3D, 2D spatial analysis and the perceptual are numerous and extend beyond the explorations of interfaces as contested spaces. Bonfire sites, a typology of contested space not used to test SpatialGT would perhaps be interesting to analyse in this way also, as the third vertical dimension might offer a new perspective on the scale and dominance of the bonfire structures relative to surrounding buildings. As illustrated in the example in Figure 7-12 below, bonfires are often constructed in dense inner city housing areas and the combination of their proximity to adjacent houses and their scale can cause significant anxiety, not to mention damage and inconvenience, for nearby residents.

Figure 7-12 Chobham Street, 10th July 2015. Picture by Jonathan Porter/Press Eye (source, McNeilly, 2015)

In July 2018, the height of bonfires became a deeply contentious issue between Belfast City Council and local communities, especially in East Belfast. Two bonfires - including the one at the site illustrated in the photo above - were deemed too high and the Department for Infrastructure was tasked with reduction. This decision provoked civil unrest in the neighbourhood over the course of several days and extensive security presence.

As explained by Participant R05, a project officer in NIHE, much of the land that bonfires are built on are owned by the NIHE and they actively support communities to manage the scale and impact of them through community, schools, landscape and outreach projects.

7.3.3.2 Obstacles/Limitations

With reference to the work in the Holyland, a participant recognised the challenges of conducting research when a population transience creates an obstacle to engagement:

> *the vast majority will be there for certainly less than three years and trying to get a fixed handle on what people perceive of the area and demand or require from the area and or influence the evolution of the area is actually quite tricky so you've not done yourself any favours by picking an area dominated by students* (Participant R06, 2017)

At the commencement of the Holyland study it was anticipated that transience might be an obstacle. While the individual students and migrant tenancies might be annual, the issues surrounding transience are perennial. For that reason, data was sought not from student or migrant residents themselves but from individuals whose role had more permanence, for example, the higher education and BME representatives, who provide continued support to students and migrant communities. These participants had more of a 'long view', by which they could interpret trends over time, predict outcomes and foresee issues. When the general trend of the background and origin of typical students - as evidenced in Test Study 2 - was presented, in this same interview, the participant was able to appreciate the depth and enduring insight that emerged in the findings and commented, "It sounds very useful" (Participant R06, 2017).

Another obstacle in the future application of emotional mapping concerned human-computer interfaces. Lack of computer and/or GIS literacy was identified as a potential limitation to engagement with a diverse range of stakeholders. This was

mentioned in regard specifically to digital forms of mapping, such as web apps whereby the public might interact with a map on a screen.

> *I suppose one thing, if we were to take forward emotional mapping or some you know public participation GIS, one thing to think about is the IT literacy rates ... if people aren't familiar with GIS, if they can't actually use the tool, they're not going to use it for example. So, you might, your results might be skewed towards maybe younger people who can use IT. (Participant R07, 2017)*

Computer literacy, mapping literacy and ability to interface with technology all have a bearing on the accessibility of digital mapping. This was one factor in the decision made early on by the author to use only paper maps in the test studies. [Another factor was concern about availability of technology and internet across a variety of locations where data gathering and exhibition would take place.] The impact of the inequalities of access to and literacy of GIS technology and data is well documented by the GIS community (Boschmann & Cubbon, 2014; Carver, 2003) To overcome this, PPGIS projects often employ a variety of media and encourage collaboration among participants. A collaborative approach was observed by Kingston et al. (2000) that tackled the technological obstacle when "children used the mouse competently to navigate the system the parents and grandparents of the children were the ones telling them what to type in to the comment boxes" (p.119).

7.4 Conclusion

Mappings were of a sufficient quality to be clearly read and understood. They communicated the narratives that had emerged from analysis as intended. Participants were able to identify mappings that were very effective and as well

as highlight gaps in the narrative. Generally, the outputs were well received and were described in some cases as "fantastic" and fascinating". The presentation of analysis in visual form was welcome and encouraged as a means to engage a wider non-expert stakeholder population.

Planning policy decision making is described as an evidence-based process, whose evidence must be able stand up in court, however participants were keen to express their views that in Northern Ireland, it was important to be sensitive to the incalculable, subtler forces at play on and within communities, particularly in spaces of sovereign and ethnic contest. The trajectory of change in planning policy decision making can be inferred from recent shifts toward more cross-departmental problem-solving on issues of deprivations and segregation, the greater understanding of contested spaces as well as the commitment to creating more shared spaces, informed as it is by the growing research in the field (Morrissey & Gaffikin, 2006; Murtagh & Shirlow, 2007; Brand et al., 2008; Gaffikin et al., 2008; Gaffikin & Morrissey, 2011; Murtagh, 2011a; Murtagh, 2011b; Lloyd, 2012).

The incremental, slow nature of the role of planning in reshaping the built and natural environment was also highlighted in that "Planning can only really deal with the change that's coming ... so people tend to overstate the importance of planning and the role that planning can play" (Participant R04, 2017). This resonates with the opinions of MLAs in Test Study 2 whereby communities were advised to be proactive in their efforts to make change instead of waiting for new legislation which could take several years to come into effect.

This reflective study uncovered perceptions of the limitations of emotional mapping as a tool for decision making at a regional strategy level as well as the challenges

of gathering data in contested, sometimes transient populations. However, it also identifies clear areas of usefulness and impact, by sitting alongside and enriching the interpretation of other quantitative research. The interpretive capacity of SpatialGT was valued and considered an addition to the assemblage of existing GIS and other information that contribute to decision-making. The capturing of knowledge of existing perceptions in contested spaces and around potential shared spaces prior to strategic or policy decision making or intervention arose as an aspect of the research with the possibility of meaningful impact.

The raster quality of mappings was seen to be compatible with other vector/point/polygon technologies such as ArcGIS and their story-telling nature was thought to be compatible with web platforms such as Story Map. The possibilities for longitudinal emotional mapping to inform the timing of future incentives such as removal or reduction of peace walls - as well as evaluate the successes of new incentives such as shared housing - was identified. HMO registration mapping, as piloted in Test Study 2, combined with relevant geo-located data on crime statistics, environmental issues such as noise complaints and waste/litter could act as a tool in thinking about cumulative impact of HMO and student housing generally. At interfaces, comment-wall analysis could be extended across more peace walls by combining 2D land use analysis, some 3D analysis of the interfaces in terms of heights, transparency, surface treatment (especially where artworks or murals are present) or in other spaces of contest where scalar, spatial and emotional issues overlap.

Chapter 8 Evaluation

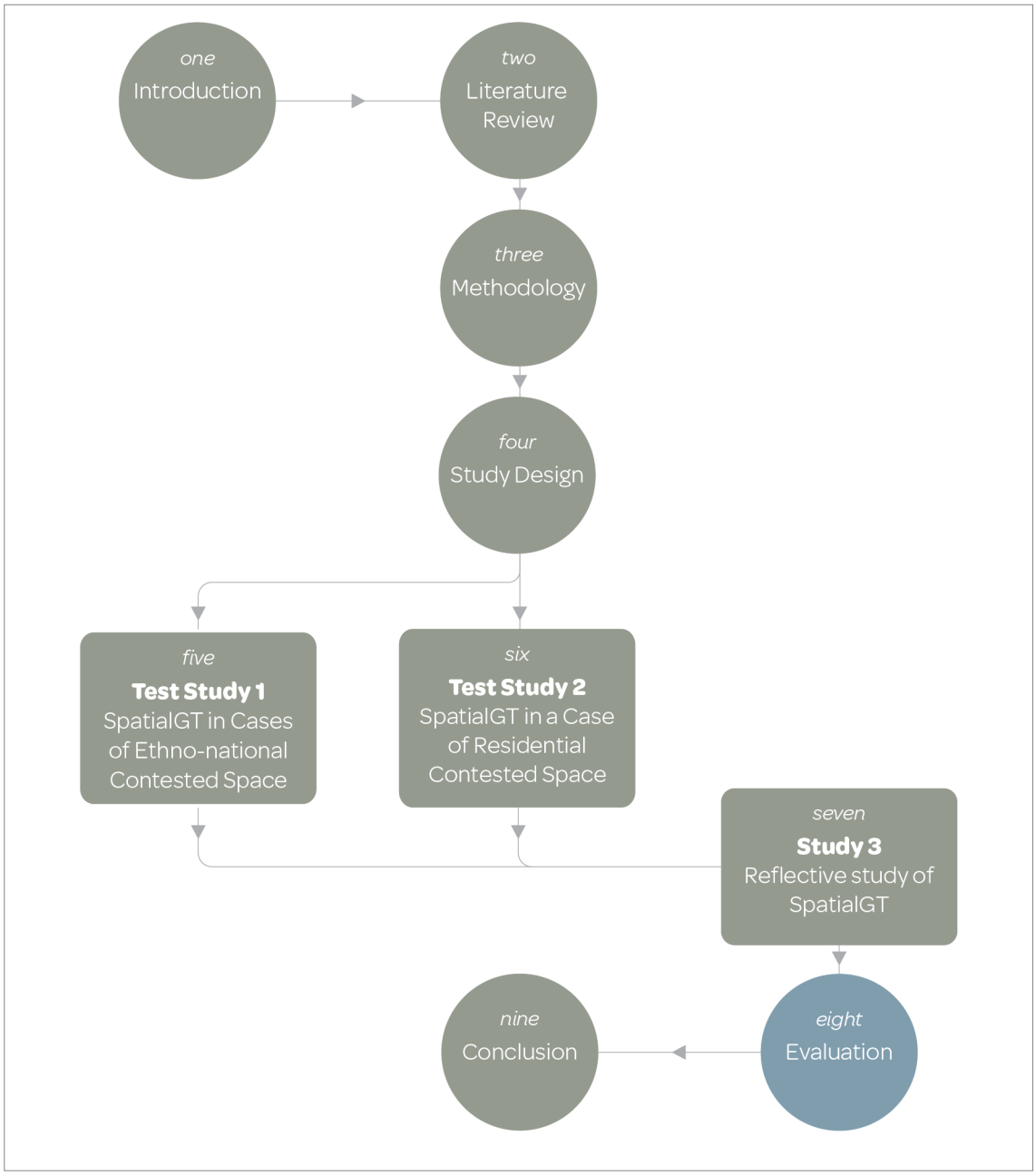


Figure 8-1 Diagram showing all thesis chapters (viii)

8.1 Introduction

In this chapter, Spatial GT is evaluated as a new methodology for emotional mapping in contested space. This evaluation fulfils the second part of Objective 4; *to assess*

potential of SpatialGT as a research methodology. It follows on from the three study chapters (see Figure 8-1 above). This appraisal draws heavily on the findings of the reflective study, and there are overlaps between the analytical framework applied there and the assessment frameworks employed here. These are merged and differentiated where appropriate. This chapter builds an additional layer of interpretation onto the studies, continuing the helicoidal course of the thesis.

There is no standard assessment criteria for the quality, validity and value of a new methodology, nor would the vast diversity of ontologies, epistemologies, technologies and disciplinary norms benefit from such standardisation. For the purposes of assessing SpatialGT here, two conditions will be measured. The first is methodological innovation, as the primary contribution to knowledge made here is in developing a new, untested methodological approach to the issues of contested space, emotion and decision making. In order to assess the potential of SpatialGT as a research methodology, it must first be established that it has aspects of newness, which can be translated into a reproducible protocol for research. The second condition to be evaluated is research quality, whereby a chosen quality framework is applied and provides a vehicle to explore the strengths and weaknesses of both SpatialGT as a research methodology generally and also the studies as they were conducted here. Criteria are drawn from peer-reviewed sources and used as the basis of evaluations in the following sections. The first section - assessing innovation - focusses on aspects of SpatialGT relating to newness, or innovativeness. As can be seen, it performs well in this regard. This is due in no small part to the interdisciplinary starting point taken as well as the ambition to rigorously test and reflect on the methodological proposition throughout the studies. The designing

of a bridge between planning, psychology, social policy and geography required a complex, robust, dynamic and original approach, which has resulted in new insights and ways of thinking for stakeholders, as well as a new methodology for use in further research.

The second section asserts the quality of the research conducted in the course of this thesis. Validity is identified as the fundamental benchmark of qualitative research. Following an assessment of validity using Dallam's classifications (2010) the findings from the studies are evaluated. In conclusion, based on the findings of this evaluation and the findings of the reflective study, this chapter makes recommendations for future research using SpatialGT.

8.2 Assessing innovation

Drawing on definitions from key texts on the subject (Taylor and Coffey, 2008; Wiles et al., 2013; Xenitidou & Gilbert, 2009) criteria were synthesised that - combined - construct a framework for the assessment of methodological innovation. It is compiled and presented below in Table 8-1. The scope of these criteria is broad so that numerous aspects of SpatialGT might be measured.

Table 8-1 Criteria for assessing innovation

1	new designs or methods (including methods of data collection and analysis, techniques and software, representation of research)
2	new concepts (including methodological concepts and frameworks)
3	technological innovations
4	new areas of applications
5	crossing disciplinary boundaries
6	extending existing methodologies and methods
7	the uniqueness of innovations

Excluded from this list are questions of uptake of the methodology or the response from the academy, which are significant markers of innovation in published research. The reason for this omission is that publication and/or dissemination of this thesis was not compulsory. Whilst tracking of uptake of SpatialGT would be an insightful and worthwhile exercise in the future, it was not designed into the scope of the PhD and therefore, it would be incongruous to use it as a measure of innovation at this stage.

SpatialGT has two distinct methodological positions. Firstly, it is imagined fundamentally as a variant of Grounded Theory Method. By adapting the fundamental process of GTM, SpatialGT can be seen to demonstrate an *extension of existing methodologies and methods* as well as bringing it to elements of GTM to a *new area of application*, namely the spatial. As discussed previously, there are very few examples of the use of Grounded Theory in the discipline of planning, and indeed qualitative methodologies are traditionally marginal to most planning practice (Davoudi, 2012).

SpatialGT establishes several new frameworks, both in its interdisciplinary conceptual development and in its methodological formulation, thus introducing *new concepts (including methodological concepts and frameworks).* Additionally, the test studies revealed new insights and interpretations, while their findings brought together a variety of datasets in new relations to each other. By approaching the research with a different, interdisciplinary perspective on emotionality in space, new knowledges were generated.

Methodological innovation is also measured or marked in terms of the *crossing of disciplinary boundaries*. In the theoretical framework of SpatialGT the disciplinary

cadastres were not principally crossed but rather stretched and overlapped. The spaces of overlap of emotional planning, qualitative mapping and decisive engagement (as illustrated in Figure 1-2) and the degrees of separation between emotional cartographies and geo-narratives were identified. The analysis and critique of these interdisciplinary texts delineated the theoretical positioning of the methodology. Building on and refining the theoretical position, a methodological formulation was made that expanded the epistemological possibilities of mapping and Grounded Theory, borrowing procedural and evaluative tools from spatial and qualitative methodologies. In this way, SpatialGT emerged directly from a cross-disciplinary theoretical and methodological construction, and is defined by differences and similarities to a number of cross-disciplinary fields such as emotional geography, deliberative planning and participatory GIS. The challenge of integrating epistemological differences in interdisciplinary research identified by Huutoniemi (2010) and discussed in *Chapter 2* have been largely overcome by the imagining of a methodology that spans disciplines in this way.

Regarding *uniqueness*, the author is confident that SpatialGT is unique. There is no evidence of published academic work that brings the two key aspects of the methodology - spatial mapping and Grounded Theory Method - together in one process. Kwan & Ding's geo-narrative (2008) is perhaps the closest documented process to SpatialGT in that it extends "current GIS capabilities for the analysis and interpretation of narrative materials such as oral histories, life histories, and biographies" (p.448). It does however differ fundamentally in that it incorporates the use of 3D GIS-based time-geographic methods and narrative analysis as opposed to Grounded Theory principles. By interlacing Grounded Theory Method

with mapping processes, SpatialGT therefore represents a unique approach. The motivation behind its invention was not primarily towards innovation but rather to tailor a new approach for a particular research question, one about emotion and contested space.

As described here, SpatialGT demonstrates some features of *methodological innovation*. New methodologies by definition to not conform to established research conventions, and as such cannot be compared directly, or measured with a standard yardstick. The value or impact, therefore, of their newness is not easy to quantify. Into this breach, the question of uptake offers a concrete signifier of impact, at least that is, in academia. While the reflective study does make a promise as to the the future uptake of SpatialGT in any given policy context, it does give a strong indication that the methodology was welcomed in a real life setting, and that senior policy makers could see a place for its development and application.

8.3 Assessing research quality

Two different frameworks are used here to assess the quality of the studies and the capacity of Spatial GT; firstly Dallam's model of validity (2010) and secondly Corbin & Strauss' "empirical grounding of findings" (1990). In the course of exploring validity and "groundedness" a narrative exploration of the research process is offered here that seeks to integrate aspects of all the studies and the underlying methodological proposition of SpatialGT.

8.3.1 Assessment of validity

As discussed previously in *3.3.8 Research quality* on page 84*,* validity and rigour are the two main instruments with which to measure research quality. Descriptive, interpretative, theoretical and pragmatic validity (Dallam, 2010) are evidenced and assessed here as indicators of the quality of the work as a whole and of the methodological soundness of SpatialGT. The table summarising these validities, which appeared earlier in *Chapter 3* is reproduced here in Table 8-2 for ease of reading.

Table 8-2 Four types of research validity (based on Dallam, 2010)

validity type	*main characteristic*
descriptive	factual accuracy of the data
interpretative	full and fair representation of the points of view of participants
theoretical	credibility of the integration methods and interpretation
pragmatic	utility and transferability, fittingness, applicability, timeliness, and translatability

In the course of assessing the empirical work of this thesis under these headings, it became clear that there is significant overlap between them. For example, in this thesis, processes of qualitative interpretation and integration - related in this framework to *theoretical validity* - have drawn on visual representation which is here associated with *interpretative validity*. It is therefore necessary to assess validity within and across these categorisations.

Descriptive validity relates to the factual accuracy of data. As a means to ensure fidelity to content and language of data gathered in the course of the studies, all interview recordings were transcribed verbatim and direct quotations were used when possible in analysis and findings. In discursive analysis, these quotations were

organised according to coding and themes which emerged directly from them. In cases where participants offered information that could be externally verified, fact-checking was conducted using external data sources such as newspapers, population statistics, crime statistics, policy documentation etc. Secondary datasets were used in this way as a supportive triangulation tool. The accuracy of participants' versions of events and contexts was not central to the accuracy of the studies as the work was more concerned with perception, opinion and emotion.

The transformation of spoken data into graphical mappings and diagrammatic outputs was conducted on statements, comments and annotations accrued during the data gathering events. Emotional mappings operate on the level of analytical tool, as well as emotional inscription. Their *factual accuracy* therefore exists on dual levels; in their faithfulness to primary data and in their capacity to make visible new insights.

In addition, mappings offer representations, the quality of which is categorised as *interpretative validity*, the second type of validity in Dallam's model (2010).

The term *interpretative validity* is somewhat misleading because it does not relate to interpretation in the sense of meaning-making. It is relates to completeness and proportionality of representation of which interpretation is and is not part. When mappings and diagrams are the vehicle of that representation, their validity is not just assessed through observation, but also in the competency of the visual communication of the data. The third, reflective study presented an opportunity to assess the success of the mappings and diagrams at communicating the data narratives by exhibiting them to experts in decision making and GIS. As presented in *Chapter 7,* the aesthetic appearance, representativeness and visual legibility

of graphic outputs were assessed to be of a high standard. This quality checking of outputs contributes to the overall interpretative validity of the process as it demonstrates the capacity for Spatial GT to formulate *full and fair representations* (see Table 8-2 at the beginning of this section).

Member checking and audit trial (see *3.3.8 Research quality* on page 84) were employed to insure that outputs fairly reflected the opinions and feelings of participants. Theoretical sampling in data gathering provided a mechanism by which "the whole story" could be sought. Data collection in Test studies 1a and 1b did not reach saturation in either case, therefore the final analyses cannot be deemed to meet a satisfactory level of interpretative validity. There are underlying hurdles to access for research in interface areas. By way of comparison, Taylor et al. (2011) studied the psychological affects of sectarian and non-sectarian violence on mothers in segregated neighbourhoods in Belfast using Constant Comparison Method and gathering data in four focus groups with a total of 33 participants. Financial incentives of £30 were given to each participant. Senior academics who co-authored this paper had many years' experience researching interfaces and segregation (Shirlow, 2003a; O'Halloran et al., 2004; Shirlow, 2008; Mesev et al., 2009), and it is likely that their professional relationships with community representatives supported their efforts to gain access. Byrne et al. (2015) outsourced field work to a marketing organisation called Perceptive Insight, who conducted a postal survey in interface areas. Of the 4,000 posted, 1,021 usable surveys were returned. This research was funded by the DoJ. The relationship between the DoJ and community representatives and organisations and their considerable investment of resources into community development is likely to have had a bearing on residents' motivation to

complete and return surveys. These two studies, while using other methodologies and methods, are related to this thesis in that they looked at perceptions at interface communities. They both however demonstrate a significant advantage of having professional or departmental relationships when seeking participation in research. These relationships were not in place in Test Studies 1a and 1b. The Reimaging projects that the communities commissioned from UU BERI had been seen as an opportunity by this author to build some relationships in the communities. On reflection, it can be concluded that the author effectively went in "cold" to two communities which are cautious and slow to open up to outsiders. This contributed in no small way to the challenge of access. In contrast, access at the Holyland was much more successful. The Community Relations Officer at Ulster University works alongside key stakeholders in the Holyland, and deals with many issues that arise for Ulster students who live there. She introduced the author to some of the other stakeholders at the beginning of the data collection stage and following that, many people were open to participating. As mentioned before, the author also had some personal connections with residents and decision makers, and a history of living in that area both as a student and as a young professional. It is proposed here that because the contest in the Holyland was not of such a violent and enduring nature as was seen at the interface sites, and because narratives were not as politically charged, it was easier for participants to express themselves freely. The research process was a much smoother one as a result. That is not to say that all voices were heard equally. Some residents' associations are highly organised and have strong leadership from individuals experienced in community development, while marginal voices such as Roma and other BME communities avoid engagement.

Access to participants at the senior policy making level was the least problematic in that individuals were keen to join the study and had an interest in the subject matter. Comparing access to participations across the three studies, there appears to be a correlation between the an individual's capacity to inform or make decisions and their capacity to engage in research. This resonates with the starting point of this research, which establishes the importance of our capacity to act and be acted upon (Siegworth & Gregg, 2010) and the relationship between that capacity and our affect/effectiveness in the world. It would seem that the more we experience ourselves as effective, the more we can engage.

Referring to the role of diagrams in Grounded Theory analysis, Buckley & Waring (2013) described the capacity for diagrams to "be used to augment text to provide new insights into portions of the analysis" (p.151). The use of mapping can be understood to function in the same way; providing visual tools and opportunities for new insights. As discussed in the previous chapter, the reflective study revealed the particular success of the "comment - wall analysis" graphic. This bringing together of different datasets - land-use and perception - can provide "new insights". The mappings can therefore be understood as tools of integration and interpretation in their own right or as "a conduit through which to move on to new, complementary research and disseminate findings" (Kitchin et al., 2013, p.491). *Theoretical validity* then, described by Dallam (2010) as "credibility of the methods that the synthesist developed to produce the research integration and the credibility of the synthesist's interpretation of the original researchers' findings" (p.75) relates to methodological processes including mapping. The capacity of other interpretative aspects of SpatialGT to achieve theoretical validity exists due to their original basis

in Grounded Theory Method, an already recognised interpretive approach. The integration of more traditional methods of interpretation with mapping - in essence the contribution to knowledge of SpatialGT - has been tested for validity in the studies and it is demonstrated that this integration has offered new openings for interpretation.

8.3.2 Assessing the findings

The following criteria were identified (Corbin & Strauss, 1990) by which to evaluate findings in Grounded Theory. They were "intended as guidelines" and were "not be regarded as hard and fast evaluative rules, either for researchers or for readers who are judging the publications of others" (p.20):

1. Are concepts generated?
2. Are the concepts systematically related?
3. Are there many conceptual linkages and are the categories well developed? Do the categories have conceptual density?
4. Is there much variation built into the theory?
5. Are the broader conditions that affect the phenomenon under study built into its explanation?
6. Has "process" been taken into account?
7. Do the theoretical findings seem significant and to what extent?

Are concepts generated? Concepts arising from analysis are called codes in SpatialGT or nodes in Nvivo. All three studies generated codes. Word clouds in *Appendix F* show open codes and axial codes created in studies 2 and 3 respectively. As can be seen, data produced hundreds of codes which clustered into themes or sub-themes, as illustrated in Figure 8-2. This grouping and categorising was conducted for each group of codes. In some cases, it was redone several times over to insure the best

arrangement of codes. This process was the first round of interpretation. As such, it was not a linear process but was adjusted and corrected throughout the study. In some cases, what appeared initially to be unrelated concepts or distinct themes merged after more in-depth analysis, and vice versa when themes were split and/or redistributed. This reflected the iterative process of SpatialGT. As much as possible, the concepts were systematically related within and across themes.

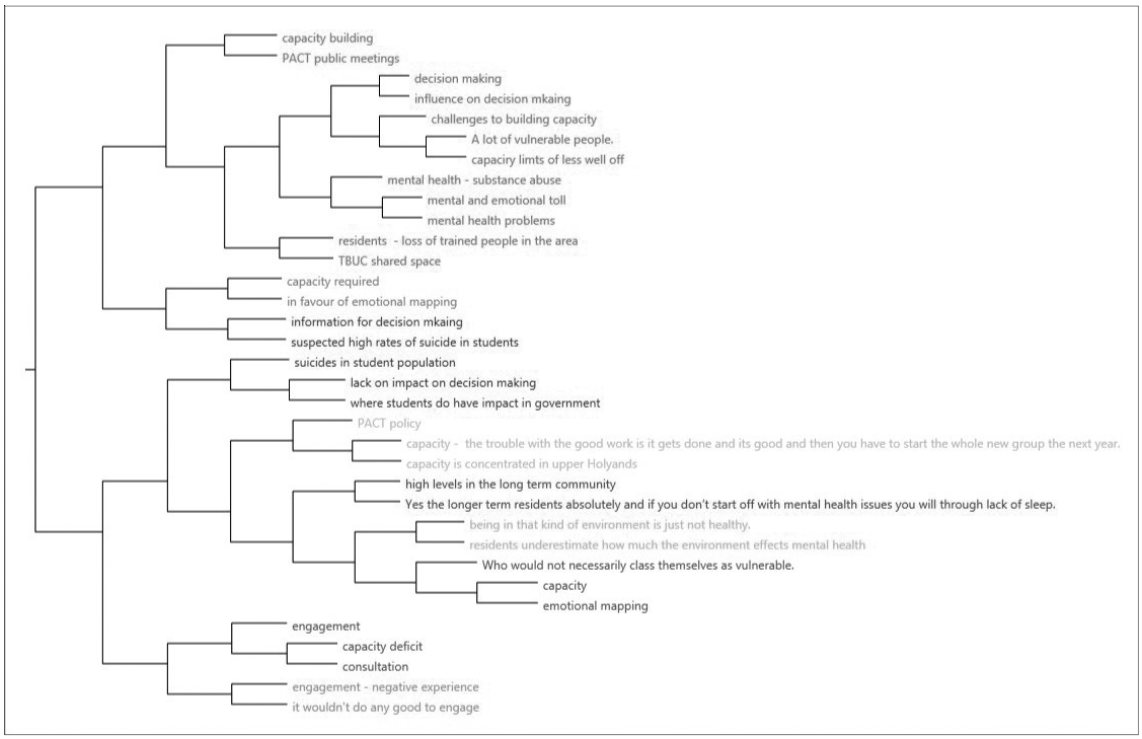


Figure 8-2 Cluster analysis of codes under sub-theme of "stakeholder relationships"

Are the concepts systematically related? Are there many conceptual linkages and are the categories well developed? Do the categories have conceptual density? Textual and graphic accounts of analyses in the previous three chapters demonstrate rigorous development of unique themes and sub-themes that do not necessarily correspond with tradition thematic taxonomies. For example in Test Study 2, the theme of "consequences of conflict" is sub-divided into "educational,

emotional, mistrust, noise, reputations and risk". These sub-divisions might not sit naturally alongside each other in a different, or a more generalised, context but here represent a unique hierarchy of consequences as expressed by participants. Such grounded theory-building is at the core of this methodology. It provides the required conceptual density and diversity of and within thematic categorisations. In all three studies, there was considerable conceptual linkage within themes. The most significant cross-study linkage arose unsurprisingly from the social aspects of fragmented communities, a defining characteristic of the contested spaces that were selected for study. "Narrative incoherence" and "fracture" - themes from studies 1a and 2 respectively - are two expressions, of the same facet of contested communities. These two themes can be read to exist in an overarching model of fragmentation, occurring at different scales: narrative incoherence at the personal whereby conflicting versions of reality exist within individuals and fracture at the group level where members of the same stakeholder group have conflicting aspirations, needs and expressions.

Another example of conceptual linkage across studies relates to the additional demand on public resources caused directly by contest and conflict. In the case of interfaces, this was noted by the duplication of bus stops. Duplication of medical, administrative and educational services in segregated communities is well documented (Deloitte, 2007; Goldie & Ruddy, 2010; Murtagh, 2011). In the Holyland, public resources are spent dealing with complaints to authorities relating to the overcrowding, associated environmental and services issues such as noise, car parking and waste management. Referring to the resources involved in supporting Holyland communities, one senior policy maker indeed stated that " this is the

area that takes up most of my resources and time" (Participant HL7, 2016).In the emerging model of understanding across the test studies here, resources are seen to be duplicated not only because of spatial segregation but also because of the proximity between groups with different lifestyles, priorities and needs.

Are the broader conditions that affect the phenomenon under study built into its explanation? The ongoing use of other information sources; statistics, land use analysis, policy documentation etc. throughout the three studies provides insights into these broader conditions and are inseparable elements of the SpatialGT process. For example, the mapping of HMO properties in the Holyland illustrated the extent of a phenomenon that was widely known and accepted among participants in Test Study 2. This map (see Figure 6-13 on page 233) was produced using publicly available statistics which are not currently disseminated in a mapped format. Mapping of the HMO data provided a visual representation that could be responded to in a visceral and immediate way. Participants reacted to this map in a number of ways. One participant was concerned about the scale of backfill if there was a significant depopulation of HMOs associated with the move of students to PBSA. Another was prompted to discuss HMO numbers combined with the internal density of units:

> *these are old houses that have been sort of carved and partitioned up into six, seven bedroom properties and even just the provision for car parking in the Holylands is absolutely crazy.* (Participant HL5, 2016)

In relation to the buildings marked in grey as non-HMO, another participant commented:

> *Yes, and even I mean your darker ones that aren't registered as HMOs*

> *you know do be mindful that they're probably rented properties as well*
> (Participant HL7, 2016)

which suggests that rental density is even higher that depicted by a HMO analysis. The density of HMO numbers is, and will continue to be, a significant obstacle for change in the Holyland. It emerged as a significant concept in the broader conditions from preliminary data gathered. The factual aspects of the issue were researched, mapped, tested, member checked and eventually built into the final thematic framework. In this way, the "broader condition" of overcrowding and HMOs is "built into its explanation". It is one of many concepts; studentification, destudentification, resource distribution, community and spatial fracture, obstacles to engagement that were brought to bear on the findings of the studies.

Has "process" been taken into account? This question is perhaps central to the thesis, whose main focus is the development and testing of a research process. In order to construct the new methodology, it was necessary to explore all aspects of the research process in detail and test how and why they operated in actual studies. Through this testing and exploration, a clearer picture of the SpatialGT process emerged. Figure 3-4 on page 71 showed the intended, or aspirational process diagram, however this has been revised here in Figure 8-3 below. As can be seen, the process is now anchored to the four methodological stages of *data collection, analysis, interpretation* and *evaluation*. The relationship between mapping and other research procedures is now understood to be parallel and continuous throughout the key stages, illustrated by the concentric circles in the diagram. Key aspects of the processes are given in the diagram labels here, with some examples, but should not be read to be exhaustive. The circular geometry of the diagram indicates

an iterative process, whereby successive rounds of the SpatialGT process build up layers of data, meaning and value to the phenomenon under study.

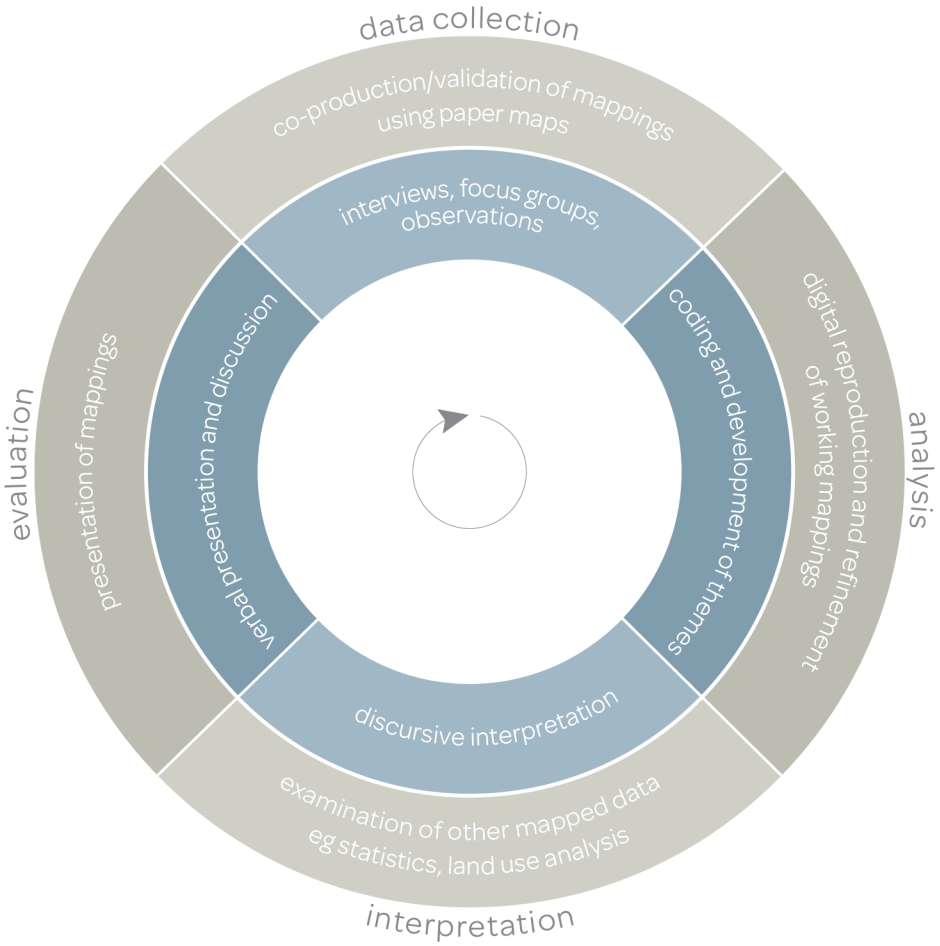


Figure 8-3 Revised Spatial Grounded Theory Method process (author's own)

This revised understanding of the combined processes of mapping and discursive interpretation encapsulates the learning from all three studies, whereby a trail-and-error approach was used to test the relevance of mapping at all stages.

Throughout data gathering and analysis, the ancillary processes of meaning-making and mapping were continuously reflected on, verified and triangulated through reworking of themes, redrawing of maps, theoretical sampling, member checking, peer-review and additional data input. This was done to ensure that invisible

factors such as researcher bias and lack of spatial literacy did not permeate, thereby colouring the research process. External processes too were considered; power dynamics and positioning of individuals in decision making structures, reputations, political and sectarian pressures on community narratives and the processes by which information becomes evidence. SpatialGT is an attempt to incorporate these internal processes as a means to impact upon the external processes.

Do the theoretical findings seem significant and to what extent? Significance of findings can be understood to be the same as 'fitness' as explored in the previous chapter. Fitness of outputs from the test studies was assessed in a number of ways: alignment to tenets of decision making, usefulness, technological practicability and impact. In addition to these mapped outputs, the discursive findings are considered here for significance.

The model of understanding that emerged from test studies 1a and 1b can be summarised thus: interfaces in Gunnell Hill/Serpentine Gardens, both visible and invisible, are interconnected. They demarcate, inscribe and define communities with multiple, sometimes conflicting narratives about identity and territoriality. In the same way that the main interface is clearly marked with barriers, some less obvious dimension to emotional contexts such as memorial and remembrance are more recognisable and permanent. Participants talked about having to keep house lights off at the rear of their houses so they didn't attract missiles, of having to move around their kitchens in the evening using only the light from the microwave or the fridge. On the other side, residents would fill the bath with water and stack towels every night in preparation for extinguishing fires and evacuating their families from their homes due to petrol bomb attacks. There were stories of night-time evacuations

by police to emergency accommodation, and resistance to leaving because of the increased risk of damage to homes if they were left empty. Residents sold their homes to SPED because they could no longer afford the insurance premiums or could no longer cope with the disruption, danger and damage. Some were able to continue living at the interface. Throughout all of this, there was an understanding on both sides that the violence was not perpetrated by those living on the other side of the barrier but by others who would travel from other parts of the respective neighbourhoods and beyond. While life for residents has improved significantly, with one participant taking about how pleasant it is to hear children now playing in the back gardens, the trauma of life under extreme sectarian violence is still with them. Is it significant that the findings here are that participants feel re-traumatised talking about these memories? To the extent that it quantifies the ongoing emotional work that interface barriers do of keeping people feeling safe, this is highly significant.

The emergence of narrative incoherence as a central theme in the interface studies has significance for future work in these areas. As discussed in *Chapter 5*, it resonates with a previous theory on narratives in interface communities (Shirlow, 2003b) that attribute victimhood and exclusion to them. What is significant here is that the new methodology provides a way to identify different expressions of victimhood even during relative peace times. The interface communities studied here continue to feel victimised, not to the same extent by sectarian attacks, although these still occur regularly, but in their treatment by the state and in the attack on their cultural identity. What is at risk of falling victim nowadays is less measurable - in that it is concerned with expressions of identity, memorial and territoriality - than at

previous times when paramilitary violence and overt sectarian bigotry were the agents of fear.

8.4 Conclusion, with suggestions for further development

As detailed in the previous chapter, several aspects of the mapped outputs were evaluated in the reflective study such as their readability and potential to impact on understanding and decision making. It is impossible however to assert any actual impact, as the research was not conducted as part of a live consultation process linked to impact outcomes. There are difficulties in measuring effectiveness of participatory mapping, as it is never clear to what extent the technology has a casual or associative relationship. For this reason, "few PPGIS researchers explore measures of PPGIS effectiveness" (Sieber, 2006, p.502). This chapter does not therefore seek to evaluate the impact or efficacy of mapping per se, but highlights some facets that might be measured or accounted for in future research with SpatialGT.

Leitner et al. (2000) assess the advantages and disadvantages of different ways of providing GIS to community groups in two broad groups: "responsiveness to community organizations' needs, and financial, political, and human capital costs of implementation and maintenance" (p.53). While the focus here is on community representation as opposed to impact outcomes, these categories could still provide a starting point - or alternative markers - for assessment of SpatialGT in future, whereby a university, public body or community organisation might commission the work. It is certainly worth considering the balance between higher level deliberative impact and grassroots representativeness, and evaluate the impact of SpatialGT as

a tool for both/either.

Elwood's critical examination of the "new and persistent ambiguities of participatory GIS" (2006, p.693) highlights wicked problems such as inequality of access to high-speed internet, data, hardware and software but balances these with the importance of advancing PGIS because "it is such a powerful mediator of spatial knowledge, social and political power, and intellectual practice in geography" (p.693). This 'digital divide' in GIS usage should be considered when designing future SpatialGT projects so that access to computers, internet software, literature and maps could be provided by a university or public body so that there is no cost implication for communities. Where expertise are required to operate mapping platforms, experts could work alongside non-experts using a co-production model to maximise representativeness and technological advantage simultaneously.

As discussed in the previous chapter, the reflective study offered possibilities for further development of SpatialGT which are revisited here to ascertain the methodological implications.

On a technical level, there are several ways in which SpatialGT could be extended. ArcGIS and Story Map were identified as technologies that might be employed to further gather, represent and communicate emotional information in a spatial way. There are numerous online interactive mapping platforms built on Google Maps, ArcGIS or OpenStreetMap which can facilitate a variety of forms of data gathering via crowd-sourcing.

Future work in contested spaces in Northern Ireland must consider the obstacles to engagement that exist by virtue of the politicisation of community narratives

and the dominance of local over outsider voices. Data gathering methods should be tailored to specific participant groups to ensure balance, completeness and representativeness.

The value of researcher relationships should be considered in each study, and if no relationships exist, they should be built with the help of colleagues, partner organisations, funders etc. to support ongoing access and participation. As suggested by a participant in Study 2, emotional mapping might best be supported if "attached to a programme designed around Good Relations" (Participant R06, 2017) where there is community buy-in associated with investment for community development.

Chapter 9 Conclusion

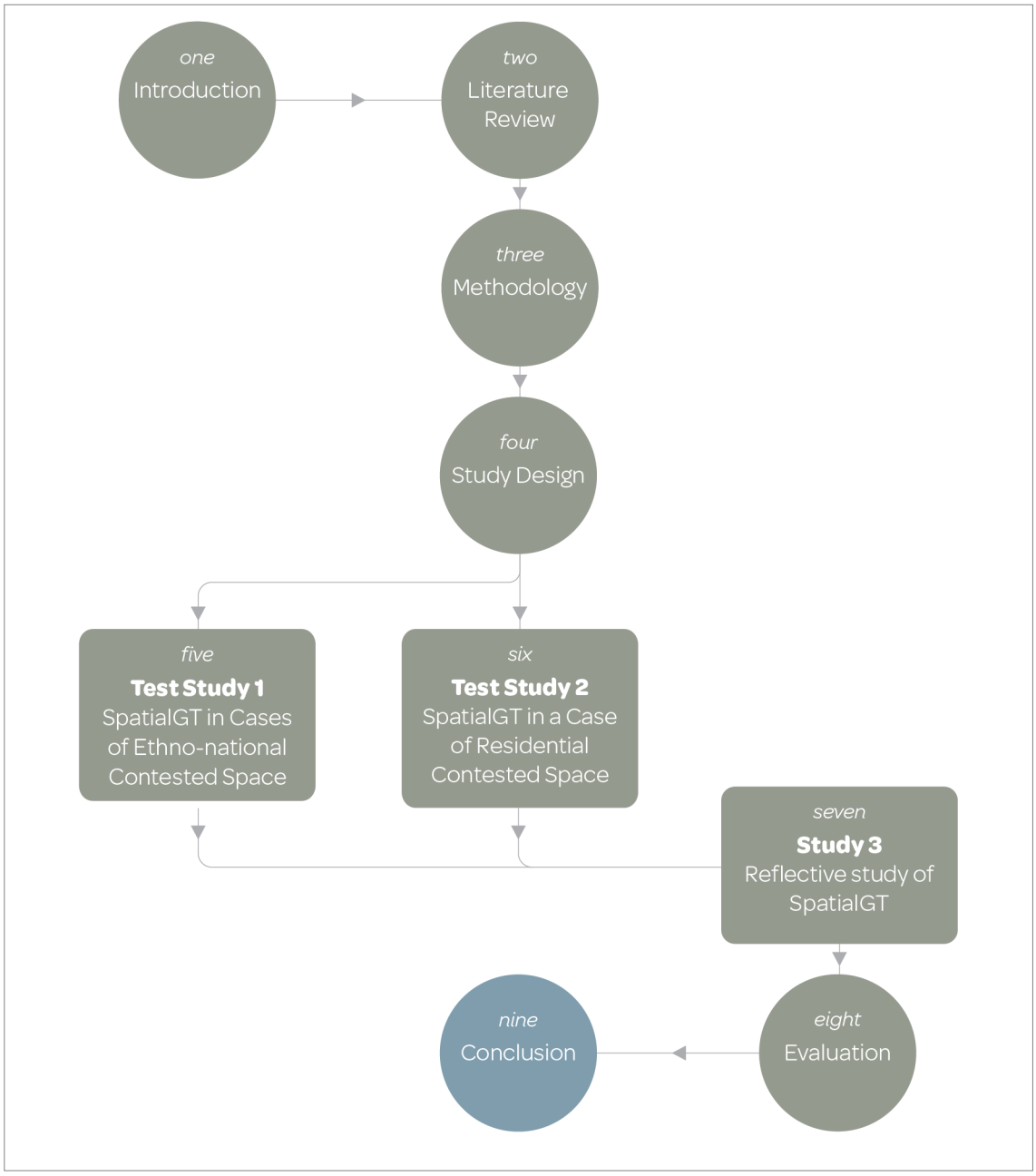


Figure 9-1 Diagram showing all thesis chapters (ix)

9.1 Introduction

The core problematic of the thesis emerged not as a question of impact - what difference emotional mapping makes - but one of method - how to map emotion

in contested spaces in NI. Exploration of literature in qualitative GIS as well as quantitative mapping of emotional information did not produce a model of understanding that could respond dynamically to the conflicting - often opposing - versions of reality in contested spaces, or provide a means to represent or analyse these multiple narratives. The contested nature of the sites for study here raised questions about the nature of subjective, spatial experience which could not be answered by superimposing models of emotion or territoriality, although these did provide a solid basis (for example, the concept of studentification in Test Study 2). The question of "what can be known" had to be answered before there could be a consideration of how it is known, how is it communicated or how it can have influence. An exploration of ontological and epistemological foundations with regard to research in space and emotion led to an assertion that a new methodology was needed in order to conduct emotional mapping. The project then became a work of invention. The key output of this thesis is SpatialGT as a proposition for mapping emotion in contested space, or contested emotion in space for that matter.

9.2 Fulfilling the objectives

The following section looks at each of the research objectives in turn and discusses how they have been fulfilled.

9.2.1 Objective 1 - Establish a theoretical framework for emotional mapping

- Conduct a literature review on mapping, emotion, planning policy, contested space and engagement

Emotional mapping is not a discreet field within any discipline It is a theoretical

proposition, within which lie a number of interesting questions and possibilities, that required the carving out of its research context. In order to do this, disciplines relating to the key concepts of emotion, mapping, decision making and contested space were explored. Through study of literature from these areas - as well as interdisciplinary literature (Bradbeer, 1999; Huutoniemi et al., 2010; Johnston, 2014; Weingart, 2010) and methodological innovation (Taylor & Coffey, 2009; Wiles et al., 2013; Xenitidou & Gilbert, 2009) as subjects in their own right - a theoretical framework for emotional mapping was constructed. Emotion and mapping emerged as central concepts, with contested space and decision making secondary. The overlaps and gaps between the four concepts became the initial literary landscape of the thesis, delineating the extent and identifying the relevant. As stated previously, if literature did not straddle two or more concepts, it was not core to the theoretical framework. That is not to say that material on any one concept was not relevant. Indeed, the methodological formulation of SpatialGT explicitly invites additional secondary data - including literature - as additional sources and in many cases, this was single-disciplinary in nature. For example, planning policy documents were an invaluable source of contextual information at the reflective stage. In this way, the thesis was informed by literature, statistics, news and other written and data sources beyond the initial literature review and throughout the empirical studies. This further stratum of secondary data enriched and reinforced the initial theoretical framework, by filling in some of the blanks left by theoretical writings, as well as adjusting the exact positioning of the research question. Given the iterative nature of this interpretative, constructivist enquiry, a full understanding of the research context could only have been reached via unfolding, testing and reflection

of the methodological proposition. Additional theory and data accumulated during methodological formulation, test studies and interpretation was superimposed onto the model used at the beginning of the literature review to define relevant academic discourses (see Figure 2-2 on page 21). The digram below in Figure 9-2 is a visual representation of these overlapping concepts, methods and topics. The emerging theoretical framework might now be characterised as **interdisciplinary methodological innovation**.

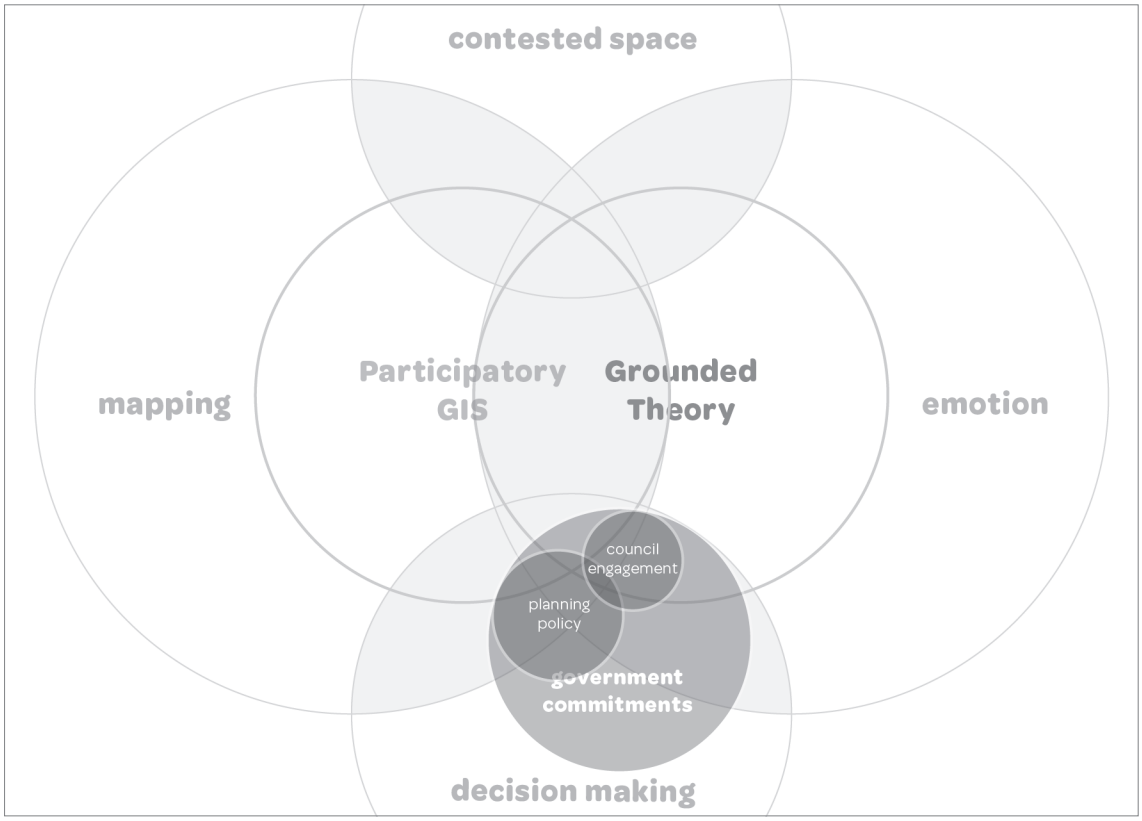


Figure 9-2 Theoretical framework for emotional mapping as interdisciplinary methodological innovation

9.2.2 Objective 2 - Use theoretical framework to design a method of capturing and recording emotion

- Research psychological, cultural, historical and theoretical understandings of emotion

- Select an inductive method to structure and employ in primary research into emotion of contested space

The expectation at the outset of this thesis was that a working model of understanding of emotionality in contested space would emerge researching psychological, cultural, historical and theoretical literature relating to emotion. The literature explored covered psychological categorisations of emotion (Adelman and Estes, 2013; Shaver et al., 1987), the role of emotion in human geography, human computer interaction, policy deliberation and planning (Boehner et al., 2007; Davidson et al., 2005; Ferreira, 2013; Fischer, 2010; Schiefelbusch, 2010), perceptions in contested space (Hickey, 2014; Shirlow, 2003a; Taylor et al., 2011). Approaches to emotion and perception ranged from the technical to the highly interpretative. As described in *Chapter 2,* there was no consensus on definitions of emotionality. Ways of researching emotion (Lang, 2010; Scherer, 2005) and qualitative methodologies (Buckley and Waring, 2013; Corbin and Strauss, 1990; Hyett et al., 2014; Osborne and Rose, 1999) were then explored to inform the empirical research process. Grounded Theory Method became the focus of the methodological research at this stage. Straussian GT principles and procedures supported this 'unknowing' beginning as well as ways to incorporate different knowledges along the way. Indeed, Gustavsson (2007) warned that:

> *In Grounded Theory researchers should avoid perceiving the empirical world through others' spectacles - through others' theories, analyses, logics or language - in order to try to discover new phenomena, relations and understanding. (p.70)*

This constructivist approach provided a means to explore new ways of understanding

emotion in contested space that did not impose an a prioiri model but could respond to emotion and perception as it arose in the research. In this way, the understanding of emotion that emerged from the data is 'grounded' in that particular context, at that time under certain conditions. The significance of this kind of qualitative research is not in its generalisability then but in its specificity and depth. In some instances, findings might have an element of transferability but it is not the primary goal of a phenomenological approach to make a general theory but rather to understand the specifics of the case.

Constructivist Grounded Theory (Corbin & Strauss, 1990) was used then as the basis of the new methodological approach to mapping emotion. As discussed in previous chapters, this particular model of Grounded Theory allows for the continued addition of other knowledges in the form or statistics, literature, news reporting etc. as a means to verify, enrich and inform the research process.

9.2.3 Objective 3 - Formulate and implement a mapping strategy

- Carry out a literature review on mapping, in particular participatory GIS and qualitative mapping
- Develop a system of mapping that is suitable for emotion data.
- Input and illustrate the 'emotional map'

In parallel to the research conducted into academic understandings of emotion, a similar exploration of mapping was carried out. Emotional cartography (Nold, 2009), geo-narrative (Kwan & Ding, 2008), grounded visualization (Knigge & Cope, 2006) and geodesign (Wilson, 2015) were all explored for their strengths and capacities for use in the contest of this thesis. Writing on critical GIS, qualitative GIS

and qualitative visualisations more generally (Elwood, 2006; Jung & Elwood, 2010; Kitchin & Dodge, 2007; Kwan, 2015; Pavlovskaya, 2002; Pavlovskaya, 2006) was explored to situate the work in a wider disciplinary discourse that recognises that mapping "does work" in constructing spaces and behaviours, and that qualitative and quantitative approaches are fundamentally interrelated . On the basis of this literature review, a new methodology was imagined. Rather than engage methods alongside Grounded Theory as in Knigge & Cope (2006) in a mixed methods approach, this thesis set out to see if there was merit - or possibilities - in bringing together procedural aspects of interpretative and mapping practices into a new, hybrid methodology. At this stage, the language of the sub-objective "input and illustrate the emotional map" appeared incongruous with a more inductive process. The inputting of data suits a different, more quantitative approach. The next key step in the process became that of testing the capacity of SpatialGT to spatially organise and interpret emotional information. The three studies identified at this stage were chosen to provide testing ground for different aspects of the methodology; different data gathering methods, different types of contest, different stakeholder relationships etc. It was in Studies 1 and 2 that a strategy for researching emotions and mapping - objectives 2 and 3 respectively - was fully developed. Due to the evolving, emerging nature of the data, interpretation and theory-building, it was only in the Study 3 that it could be fully assessed. Early on, the author considered interviewed stakeholders in decision making roles in the course of Studies 1 and 2 thereby providing a sense of completeness before moving on to the next. It was decided however that they would be approached when all mapping and analysis was complete. On reflection, this proved to be a more efficient arrangement in that it

avoided repetition, and made best use of the very limited time available with these key stakeholders. Additionally, emotional mapping could be reflected upon in its entirety in this final reflective study.

The resulting new methodology, SpatialGT combines mappings and discursive work to explore, analyse, interpret and disseminate findings relating to emotion in contested spaces.

9.2.4 Objective 4 - Assess the potential impact/utility/ usefulness of SpatialGT

- Assess quality, fit and possibilities of mapped and discursive outputs in decision making
- Assess potential of SpatialGT as a research methodology

Chapter 7 - elucidating Study 2 - addresses the first sub-objective in detail, whereby the quality, fit and possibilities of mapped and discursive outputs in decision making were asserted via the presentation of outputs to senior policy makers in the built environment in Belfast. Drawing on interviews with these stakeholders, a picture emerged of a multi-level policy making structure from government, local council and community scales, structured around key strategic frameworks. The general direction regarding engagement in contested spaces is that communities and bottom-up groups of concern are slowly finding more space to have a voice via community development work and the government's Good Relations unit. Strategic policymakers are becoming more receptive to the less measurable forces at play in a divided society and how they effect communities' use and construction of meaning in the built environment, such as territoriality, segregation and fear (Gaffikin & Morrissey, 2011; Shirlow, 2003a). In response to the prevailing residential separation

between PUL and CNR communities despite relative peace in the last twenty years, the government is actively encouraging mixed, or "shared" housing schemes. Additionally, location of immigrant and refugee populations and associated social issues are being addressed through mapping among other methods.

Within existing policy frameworks, participants critiqued how and where emotional mapping might have compatibility with mechanisms of decision making and engagement in their organisations. Some participants with expert technical knowledge contributed to an understanding of how emotional mapping might be extended and embedded into existing information technology practices. The quality of the outputs was considered very high in terms of appearance, representativeness and legibility, and the narrative presentation and discussion during interviews during sessions was received with great interest.

Regarding the second sub-objective - assessing the potential of SpatialGT as a research methodology - a lengthy evaluative exercise was conducted and reported in *Chapter 8*. As no a priori measure of the validity of new methods exists, it was incumbent on the author to consider a wide range of quality indicators that might have relevance to this research and formulate a matrix of measures. As might be anticipated, this is rooted squarely in qualitative research validity, Grounded Theory validity and also, draws on literature for criteria assessing methodological innovation. The evaluation considered many different facets of the work in the context of these varied criteria and frameworks and ultimately establishes research validity and quality.

9.2.5 Objective 5 - Identify implications for future development and application of SpatialGT

This thesis set out with the aim of exploring the potential application of emotional mapping as a tool for policy decision-making in contested spaces. Existing literature and methodologies did not provide a clear direction for such mapping. It was therefore necessary to conduct an interdisciplinary literature review to provide a theoretical framework. The bringing together and overlapping of this literature as described previously has important implications for the disciplines involved in that it highlights shared knowledges across disciplines and fields. From a social constructivist position, emotion, space and mapping share some common characteristics in that they both shape our environment and our movement in space. The assertion that civic engagement as a core element of well-being connects the fields of decision making and policy deliberation to back to emotion. The previously uncharted interdisciplinary area of emotional mapping has now been defined and located in relation to relevant disciplines and other interdisciplinary research.

The formulation and testing of a methodology as a unique response to the research question makes a significant contribution to knowledge in the field, not only in methodological terms but also in the new knowledges gathered in the course of the studies conducted.

There are numerous implications for future research in contested spaces. The first to be discussed here relates to data gathering methods.

Reflecting on the process of data gathering, some lessons were learned across the three studies. The most significant of these, as is explained in Test Study 1 is the effect of context on the data, in that different meanings can attributed to a topic by

the same participant in a different data gathering setting, depending on who else is present, perhaps the location of the event, and the way the topic arises. Focus groups in this early study revealed the complex interrelationships within and across interface communities, even among participants who have experience working alongside each other in cross-community contexts. The emotional, personal focus of the research process used here drew out strong opinions that did not sit well in mixed contexts and necessitated the framing of additional meanings by way of explanations. For example, returning to the "bulls-eye" example used in *Chapter 5,* the participant who used the term in the first focus group reintroduced to the subject a total of seven times during the second focus group to reiterate their point that bulls-eye should not be interpreted as "target". Such emphatic reframing, which was reassuring in nature, suggests a very strong desire to erase one interpretation with another. The result however was the overlaying of multiple meanings. The representational aspect of the mapped outputs adds a further power to opinions and feelings that do not usually have a visual expression. For participants seeing their own opinions and feelings inscribed in this way there was a sense of vulnerability and challenge, in a society that doe not freely welcome self-expression. The Irish poet Seamus Heaney (1990) describes:

> *...The famous*
> *Northern reticence, the tight gag of place*
> *And times: yes, yes. Of the "wee six" I sing*
> *Where to be saved you only must save face*
> *And whatever you say, you say nothing. (p.79)*

This cultural reticence was actively reinforced throughout the Troubles with propaganda materials, posters, flyers and graffiti stating "Loose Talk Costs Lives"

and the eponymous "Whatever you say, you say nothing" slogan. This thesis sought to explore extensions of personal voices in marginal spaces in an effort to bridge the gap between lived experience of place and the polices that shape them. It was conducted within the bounds of the "wee six" counties of contested sovereignty where self-expression fundamentally challenges established narratives of political, cultural, religious, and increasingly "peace-building" narratives. Byrne & Gormley-Heenan (2014) attribute structural significance to peace walls "because their continued presence contradicts the popular narrative that Northern Ireland is a 'normalised society' (p.448). These external processes of the generation, perpetuation and suppression of conflicting versions of Northern Ireland has come to bear on the test studies at interfaces in a profound way, and raises a significant question about the most effective, sensitive and practical ways to gather data in these kinds of contested spaces. The capacity of qualitative methods to unearth new personal and social experiences is of great value here, but perhaps there are ways in which previously hidden versions of reality might 'do new work' when shared. The power of these stories, memories and reflections is amplified and prised open to interpretation by visual representations, and this process must be conducted with caution and respect.

As reported in the studies, desk-based methods, focus groups, interviews and participant observations were all used here. While focus groups and interviews produced data of great richness, observations and desk-based methods (news reports, statistical analysis, land use analysis) produced a broader understanding. Together, these methods produced a complementary array of data, which provided verification and triangulation, two key tools in validation of qualitative research.

Where this combination of methods was most successful was where they were used alternately. By moving from the scale of the one-on-one formal or informal interview, to a wider views in groups observation and back again to interview, with some secondary data sourced along the way - as was the practice in the Holyland study - a variety of scales, intensities and priorities could inform each step of the theoretical sampling process, thereby leading to more satisfactory and saturating data. This intermingling of methods should be employed in future to test different dimensions of the phenomena under study at different stages in the analysis process.

Mobile interviews or "walk-alongs" (Finlay & Bowman, 2016) are emerging as a popular data gathering method. They have a strong applicability when capturing participants' perceptions relating to spaces and place. While moving through these spaces, unique memories and connections can be accessed that might not emerge in a static interview setting. In any future extension of SpatialGT, these could prove valuable additions to the data gathering methods explored in this thesis.

As discussed in *Chapter 8*, group dynamics were seen to effect data gathering events, and to alter the meaning that participants attribute to certain concepts and/or mappings. This might be an advantage or a disadvantage to the researcher, but in either case must be treated with caution.

The thesis uncovered knowledge around when conducting emotional mapping might have most impact in decision making. Consistent with literature on the qualitative roots of quantitative GIS (Pavlovskaya, 2006) the research here made the connection between social, perceptional experience in spaces of contest and the direction of subsequent mapping and policy making, strongly suggesting that emotional mapping could help to establish trends, themes and preconceptions prior

to strategic moves. For example, on the geo-locating of suitable sites for shared housing projects , GIS algorithms and selection criteria might be informed by longitudinal emotional mapping in areas of housing need prior to quantitative spatial analysis in order to build confidence in ongoing sustainability of the schemes that might otherwise stimulate contest among residents and surrounding communities.

Another example of when and how emotional mapping might help communities communicate their perceptions or concerns is through the planning application system whereby a community might gather information in such as way that it constitutes “material consideration” e.g. Public Opinion, Need, Resources and Economic Factors, Power to impose conditions, Social and Economic Matters. These material considerations might then influence planning application decisions. Additionally, discursive and mapped evidence of the emotional and environmental impact of high-density HMOs on those living in and near to them - increased noise pollution, littering and general degradation of the environment - might help to articulate the cumulative impact of these types of dwellings, which could have a bearing on planning decisions.

This research revealed a correlation between the engagement of different stakeholder groups with varying degrees of agency in decision making processes. It would seem that the degree to which individuals feel they are part of decision making can be an indication of how they will engage in a research process. Those who make policy will be articulate and informed, and often will have an interest in and clear opinions on the subject of research. Those who feel marginalised by dominant voices in communities of contest will be less likely to engage. This issue was explored in the literature review in the form of the ladders of participation and the co-production

model (Arnstein, 1969; Wiedemann and Femers, 1993; Realpe & Wallace, 2010). Perhaps the outcome of this thesis in relation to the issue of capacity or agency could be further explored to capture stakeholders own sense of their agency in decision making alongside the shaping of their environments in a day-to-day way.

The implications of this for future research where there is such a spectrum of stakeholder voices might be that obstacles to engagement were explored and addressed early in the process. The emotional dimension to research such as this, focusing as it did on lived experiences in spaces of conflict, should be recognised from the outset as a potential obstacle for those living and interacting daily in those spaces. Mistrust, perceived risk associated with unknown researchers and a limited sense of benefit from research to the community or individual all act as barriers to engagement. Emmel et al. (2007) examine these obstacles in the relationship between researchers and participants that are "hard-to-reach", focusing on the role of gatekeepers in controlling or supporting the research process in a way that sheds some light on the experiences gained in this thesis, and suggest positive steps that might be taken by researchers to build rapport and credibility through empathy and spending time in the vicinity of participants, perhaps attending community events, or just "being seen". Sixsmith et al. (2003) explored the advantages of shared experience between researcher and participant, suggesting that a shared background or lived experience can help to generate trust in the researcher-participant relationship also. While it might not always to possible for a researcher to find a common ground in terms of background or experience, especially when research seeks to capture opposing perspectives, it is nonetheless important to consider due to the potential for impact on research.

9.3 Conclusion

The research question **How can mapping of emotions make a meaningful contribution to policy decision making in contested space?** can be answered thus:

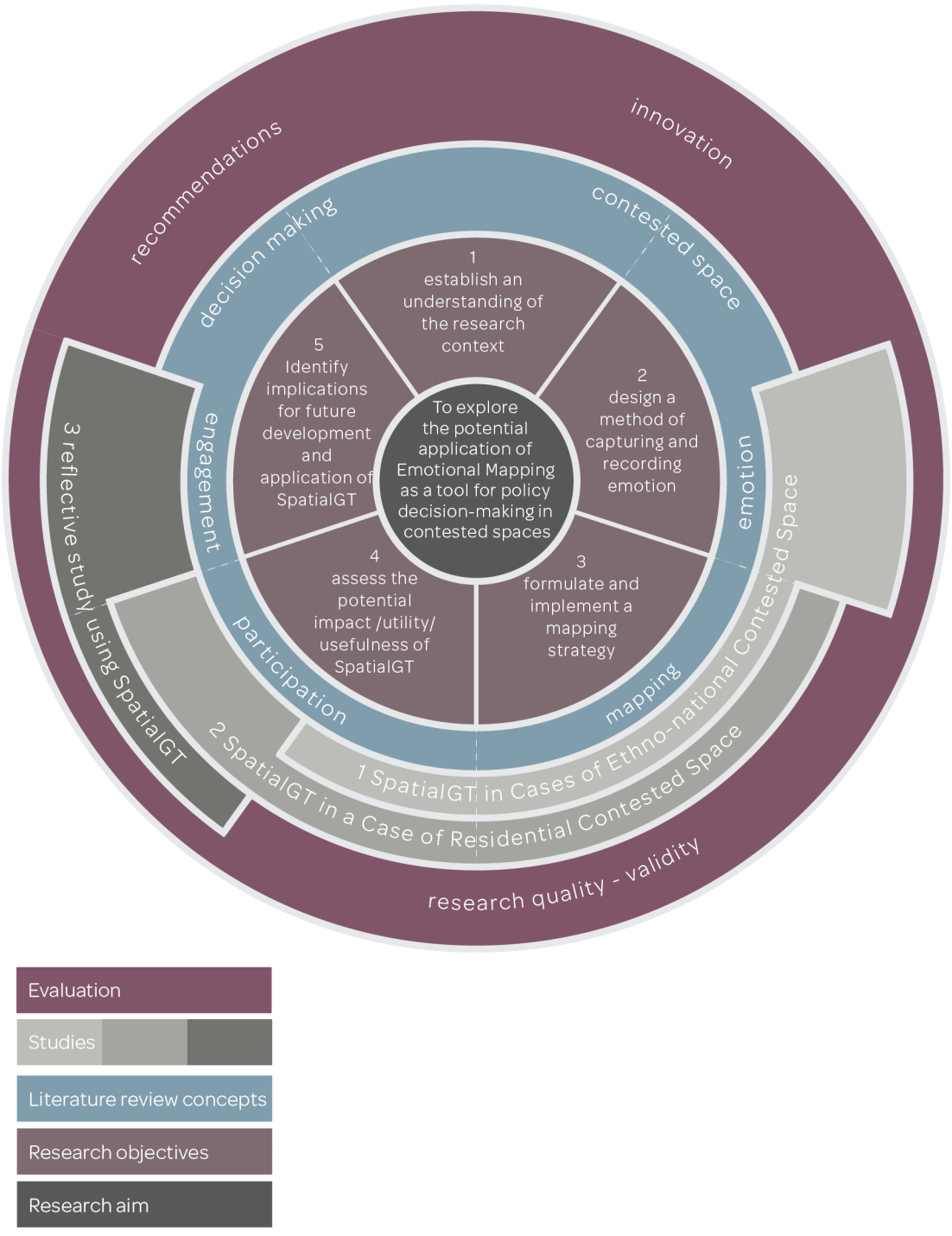


Figure 9-3 Thesis map showing aim, objectives, theoretical concepts, studies and evaluation

We carry maps within us as we navigate. We construct and reconstruct meaning as

we memorise structures and space. We memorialise emotional events in the built and natural environment, in an effort to inscribe and thereby recognise our selves and each other. In interface communities, the urban landscape is continually redrawn in variegated shades of green and orange, delineated by fences and maintained through sectarian perceptions, emblems and behaviour. In the Holyland in South Belfast, the patterning of contest is vascular, with no more than Victorian single-skin brick walls dividing cellular, disparate lives. In both cases, the environment is shaped to a large degree by conflict and in turn, behaviour responds to the physical, whether it is a five metre high fence or an overcrowded, dilapidated HMO. In all cases, barriers to movement and conflict restrict our capacity to act in the world. It is hoped that emotional mapping and the resulting SpatialGT methodology has helped make a shift in perception from the individual to the wider communities, a shift from the spatial to the more perceptional and from the silent to the heard.

> *The best maps are not published, are not accurate or even sensible, but are the maps we make ourselves, about our cities, towns, villages and landscapes, our kith and kin. (Fowler, 2017, p.32).*

The quotation above is presented to sum up the spirit of this thesis, and to acknowledge the lived experiences, narratives, conflicts and hopes of residents in some of Belfast's contested spaces who shared their mappings.

Appendix A

The following sections contain some of the documentation that was circulated to potential participants in paper and/or digital form along with an invitation to the studies.

- *Section A.1* contains the Information for Participants documentation for test study 1a (Gunnell Hill) produced in accordance with the University Research Governance Guidance
- *Section A.2* contains the Information for Participants documentation for test study 2 (Holyland) produced in accordance with the University Research Governance Guidance
- *Section A.3* contains the Information for Participants documentation for study 3 (reflective) sent in advance of interviews, and followed up with accordance materials produced in accordance with the University Research Governance Guidance
- *Section A.4* contains an sample interview schedule used in an interview conducted as part of test study 2 (Holyland).
- *Section A.5* contains an sample interview schedule use in an interview conducted as part of study 3 (reflective)

A.1 Test study 1a - Information for Participants

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important that you understand what the research is for and what you will be asked to do. Please read the following information and do not hesitate to ask any questions about anything that might not be clear to you. Make sure that you are happy before you decide what to do. Thank you for taking the time to consider this invitation.

What is the purpose of the study?

This study is part of a revisioning project being carried out by BERI on behalf of Greater Whitewell Community Surgery (GWCS). The revisioning project is one of a number of similar projects under way across Northern Ireland funded by the IFI Peace Walls Programme (PWP). The PWP aims to build confidence and relationship interventions in interface communities to "help residents reach a position where they feel it is safe and appropriate to proceed with the removal of Peace Walls in their area." It is anticipated that the findings of this study will inform GWCS and the IFI in making decisions about how to reach this aim.

The primary aim of this study is to explore perceptions and/or emotions of residents living adjacent to an interface barrier in relation to existence, the reduction and/or reimaging. This study seeks to construct an 'emotional map' of an interface barrier at Gunnell Hill and Serpentine Gardens, Newtownabbey in order to aid future decision making about reduction or reimaging of the structure.

In order to do this, a number of focus groups will be held in nearby community centres and we invite you to attend and share your thoughts and experiences of the interface barrier.

Why have I been chosen?

All residents whose homes are bounded on at least one side by the interface barrier at Gunnell Hill/Serpentine Gardens will be invited to participate in a focus group.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part, you will be given this information sheet to keep. You will also be asked to sign a consent form. If you choose to take part, you can change your mind at any time and withdraw from the study without giving a reason, without consequence.

What will happen to me if I take part?

In order to participate, you will be required to attend a single focus group session, lasting approximately 1hr 30 minutes. Separate focus groups will be set up for each of the two communities. The proposed locations for focus group sessions are identified in Table A-1.

Table A-1 Focus group locations for the two groups of residents at Gunnell Hill and Serpentine Gardens

Residents	Focus Group location
Gunnell Hill	White City Community Centre, Navarra place, Whitewell, BT36 7JX
Serpentine Gardens	Greater Whitewell Community Surgery, 878 Shore Road, BT36 7DQ

The session will be chaired by a member of the research team for the reimaging project. Members of GWCS will be present to welcome and introduce participants. There will be a maximum of ten participants in attendance at the focus group session. A series of topics (see table 2 below) will be raised for discussion at the first focus group session.

Table A-2 Table 2 Topics for focus group session

1	The Northern Ireland Executive commitment to remove peace walls by 2023. Are communities consulted on these policies?
2	Perceptions of the fence: how do residents living next to it perceive it?
3	Reduction of the fence: positive/negative feelings about reduction. Why or why not.
4	Reimaging of the fence: positive/negative feelings about reimaging. Why or why not.

Subsequent sessions will have different but related topics, depending on the information gathered at the preceding sessions. The particular data analysis to be used in this study (Grounded Theory method) is described as a 'snowball approach'. Each new round of data collection is informed by data already collected and analysed, so no two sessions will be the same. However, all new data collected at each point in the process will be of equal importance.

What do I have to do?

Please contact a member of the GWCS team in advance of the session you wish to attend and let them know you are coming. Contact details are provided at the end of this participant information sheet.

What about side effects?

This study has no anticipated side effects.

Risks and/or disadvantages?

This study has no anticipated risk of harm. However, if you feel that you require further information, contact details for relevant organisations are provided at the

end of this participant information sheet.

Are there any possible benefits in taking part?

There are no direct benefits to you for taking part in this study. However, it is hoped that the findings from the study may help in the development of a community-base, sustainable approach to re-visioning the interface barriers in the Whitewell area and Northern Ireland generally.

What happens when the study ends?

As a follow-up, an anonymised transcript of the focus group session will be sent to all participants. If you feel that you would like to add, remove or amend anything you said in the session, you can contact the research team via email or telephone and the required changes will be made.

What if something goes wrong?

This study seeks to gather information a variety of emotions in relation to the interface barrier. As such, it may have an impact on participants' perspective during and/or after the focus group. It is unlikely that participants will experience adverse effects due to the study. However, in the event that individuals seek help or support after the study, details of local support organisations will be provided by GWCS.

Any complaints will be taken seriously and should be made to Chief Investigator or directly to BERI depending on the nature of the complaint

Will my taking part in this study be kept confidential?

Data will be held securely and in confidence, unless required by law, and all identifiers will be removed prior to publication as required under Data Protection

legislation. However, Freedom of Information legislation will allow access to certain non-personal or generalized data.

Data (documentation and records) will be kept for a minimum period of ten years after the end of this study. It will be classified and stored in accordance with University of Ulster codes of practice and the Data Protection Act 1998.Electronic information will be stored on a secure, password-protected central University workspace. If this information must be transferred to portable storage it will be encrypted using approved encryption. It will not be transferred via email to accounts that are not University accounts.

What will happen to the results of the study?

A report on this study will be delivered to GWCS. This will include a brief description of context, the project aims and objectives, research methods, data analysis, key findings and conclusion/recommendations.

Who is organising and funding the research?

Greater Whitewell Community Surgery (GWCS) have organised and funded this research by way of a grant from the IFI Peace Walls Programme. It makes up part of a revisioning project being carried out by BERI on behalf of GWCS which explores options for reducing and reimaging various interface barriers within the Whitewell area. For more details of this over arching project, feel free to contact GWCS.

Who has reviewed this study?

The study has been reviewed and granted ethical approval from the University of Ulster, Built Environment Research Institute Research Ethics Filter Committee.

Contact details

PhD candidate - Jennifer O'Neill

Ulster University, Jordanstown Campus, Shore Road, Newtownabbey, BT37 0QB

oneill-j39@email.ulster.ac.uk

Tel: 07780 787453

Chief Investigator - Neale Blair

Ulster University, Jordanstown Campus, Shore Road, Newtownabbey, BT37 0QB

n.blair@ulster.ac.uk

Tel: 028 90366221

Greater Whitewell Community Surgery

878 Shore Rd, Newtownabbey, County Antrim, BT36 7D

mary@gwcs.org.uk

Tel: 028 9085 9911

A.2 Test study 2 - Information for Participants

Information for participants - emotional mapping in the Holyland, Belfast

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important that you understand what the research is for and

what you will be asked to do. Please read the following information and do not hesitate to ask any questions about anything that might not be clear to you. Make sure that you are happy before you decide what to do. Thank you for taking the time to consider this invitation.

What is the purpose of the study?

The primary aim of this study is to explore perceptions and emotions of residents and other stakeholders within the Holyland. This study will explore the usefulness of mapping and mapped data in decision making about the area. In order to do this, I invite you to attend a short interview and share your thoughts and experiences of the Holyland.

Why have I been chosen?

Residents and other stakeholders in the Holyland are invited to contribute to this research.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part, you will be given this information sheet to keep. You will also be asked to sign a consent form. If you choose to take part, you can change your mind at any time and withdraw from the study without giving a reason, without consequence.

What will happen to me if I take part?

In order to participate, you will be required to attend an interview, lasting approximately 30 minutes. The proposed location for interviews is Common Grounds Café on University Avenue. Other venues deemed more suitable and

convenient will also be considered.

The interview will be conducted by Jennifer O'Neill who is a PhD candidate at School of the Built Environment, Ulster University (UU). The interview will focus on the emotional impact of living, working or otherwise engaging in an area where there is conflicting needs between users. Participants will be invited to discuss their personal experiences living in the area, and also the experiences of those they represent, for example if they are a member of a community organisation or public body. Table A-3 below demonstrates the kind of questions that will be asked.

Table A-3 Topic guide for interview

1	How does living in the Holyland impact emotionally, socially and psychologically?
2	How do you feel about the various types of residents living in the area?
3	What is your sense of community, division or otherwise among the current residents?
4	How could residents' experiences be best supported and respected in the future planning for the area?
5	What are your hopes and aspirations for the future of the Holyland?

Maps will be used during the interview to try and locate aspects of emotional or perceptual information. Participants will be invited and supported to interact with the maps in any way they wish.

Subsequent interviews will have differing but related topics, depending on the information gathered at the preceding sessions. The particular research method used here is described as a 'snowball approach'. What this means in practical terms is that if a particular concept, for example noise pollution, arises as highly significant in one interview, it will be raised by the interviewer in subsequent interviews to assess the extent of significance across a range of participants. Anonymity will be

maintained throughout however.

What do I have to do?

Please contact Jennifer O'Neill on 07780787453 or oneill-j39@email.ulster.ac.uk if you wish to attend an interview.

What about side effects?

This study has no anticipated side effects.

Risks and/or disadvantages?

This study has no anticipated risk of harm.

Are there any possible benefits in taking part?

There are no direct benefits to you for taking part in this study. However, it is hoped that the findings from the study may offer new insights into the personal impact of contest in the Holyland.

What happens when the study ends?

If you feel that you would like to add, remove or amend anything you said in the session, you can contact the researcher via email or telephone and the required changes will be made.

What if something goes wrong?

This study seeks to gather information a variety of emotions in relation the contest within the Holyland. As such, it may have an impact on participants' perspective during and/or after interview. It is unlikely that participants will experience adverse effects due to the study. However, in the event that individuals seek help or

support after the study, please contact the researcher and she will endeavour to find suitable community, institutional or psychological support. In the case of student participants, support services of the relevant Higher Education Institution will be signposted. In the case of Roma or other ethnic-minority participants, suitable support services will be identified in conjunction with the relevant community organisations, for example, Romanian Roma Community Association of Northern Ireland or the Northern Ireland Muslim Family Association. Any complaints will be taken seriously and should be made to the PhD candidate or the Chief Investigator (contact details below).

Will my taking part in this study be kept confidential?

Data will be held securely and in confidence, unless required by law, and all identifiers will be removed prior to publication as required under Data Protection legislation. However, Freedom of Information legislation will allow access to certain non-personal or generalized data. Data (documentation and records) will be kept for a minimum period of ten years after the end of this study. It will be classified and stored in accordance with UU codes of practice and the Data Protection Act 1998.Electronic information will be stored on a secure, password-protected central University workspace. If this information must be transferred to portable storage it will be encrypted using approved encryption. It will not be transferred via email to accounts that are not University accounts.

What will happen to the results of the study?

The findings from the study will be written up in a thesis, which will be available to view in the UU library at the conclusion of the PhD.

Who is organising and funding the research?

The overall PhD was funded by the Northern Ireland Department of Education and Learning. No additional funding has been acquired for this Holyland study, and is it not carried out on behalf of any interest group, private or public.

Who has reviewed this study?

The study has been reviewed and granted ethical approval from the UU Built Environment Research Institute Research Ethics Filter Committee.

Contact details

PhD candidate - Jennifer O'Neill

Ulster University, Jordanstown Campus, Shore Road,

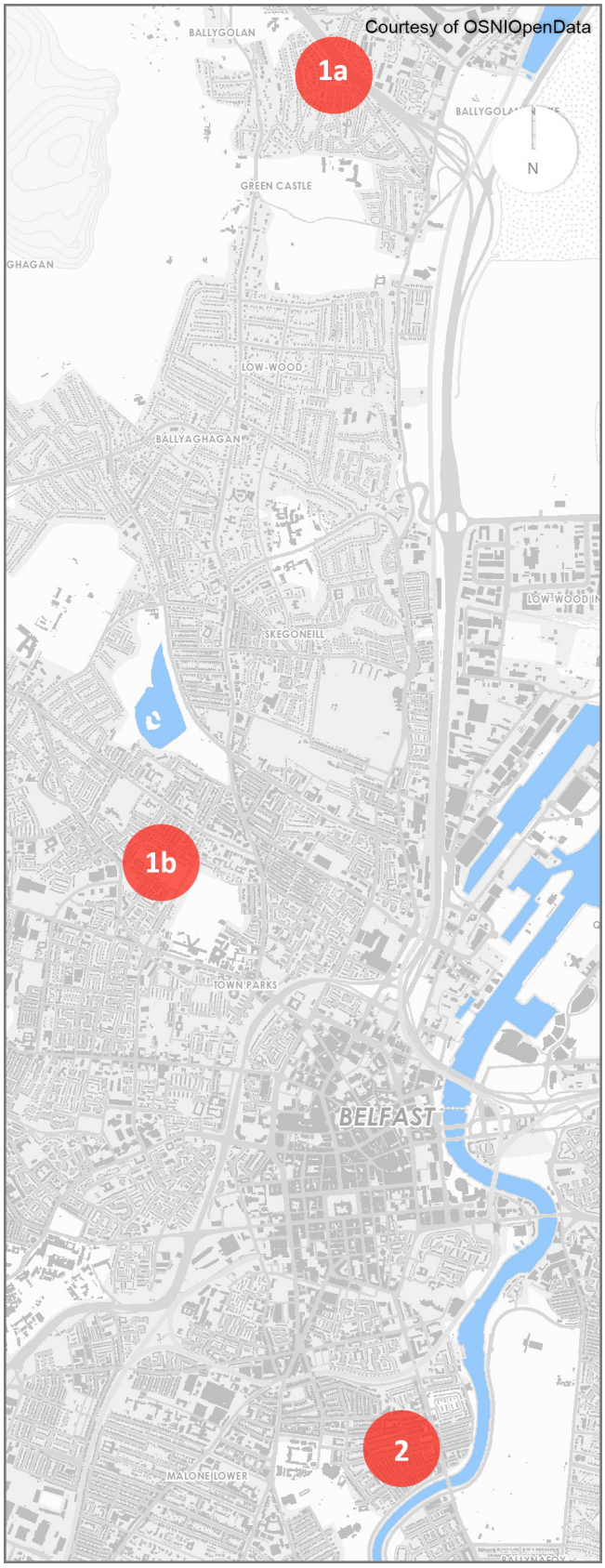


Figure A-1 Map of Belfast showing locations of study sites

Newtownabbey, BT37 0QB

oneill-j39@email.ulster.ac.uk

Tel: 07780 787453

Chief Investigator - Neale Blair

Ulster University, Jordanstown Campus, Shore Road, Newtownabbey, BT37 0QB

n.blair@ulster.ac.uk

Tel: 028 90366221

A.3 Test study 3 - Information for Participants

The title of my PhD is "Emotional mapping: exploring how mapping can add value to knowledge on decision making in contested space".

The primary concern of my work is developing, testing and evaluating the processes of emotional mapping in contested spaces. I developed a new methodology which I named Spatial Grounded Theory Method and tested it in two sites of ethno-national contest at interface locations, one in Whitewell and one in Cliftonville/Oldpark (1a and 1b respectively in Figure 1). A second test study was conducted in the Holyland (2 in Figure 1) as a site of residential contested space.

The third study in my PhD is a reflective piece, in which I seek to evaluate the usefulness of the process to decision making. I would like to interview you on your perceptions of how this new methodology might help inform your decision making. Using the outputs of the interface and Holyland studies as sample materials,

interviews will be very focussed on the role of mapping and emotion in engagement and decision making.

The following topic guide will be adhered to:

- Introduction to the emotional maps and their context
- Readability of the maps
- Current institutional position in regard to public participation and the working practices of this
- Current institutional use of mapping/GIS
- Contexts - public engagement: discuss any methods currently used to engage residents and other stakeholders
- Usefulness of emotional mapping in aiding decision making/public engagement in decision making process

The interview process will last no more than 30 minutes, and will conform to UU ethical guidelines1. I would be grateful if you would let me know at your earliest convenience if you wish to take part in this study. I will endeavour to arrange the most convenient time and location for this short interview.

Jennifer O'Neill

oneill-j39@email.ulster.ac.uk

07780787453

1 You contribution will be used solely for the purposes defined by the project. You can refuse to answer certain questions, discuss certain topics or leave the session without prejudice. To facilitate the researcher's job, the session will be audio-recorded. Data will be handled so as to protect confidentiality. Therefore, no names will be mentioned and the information will be coded to maintain anonymity. Data will be stored securely by Ulster University for a period of ten years.

A.4 Test study 2 - interview schedule

Introduction

- Explain the purpose of the study
- Inform participant of schedule to be followed and ensure participant is aware of their right to take a break
- Review confidentiality
- Give the participant the opportunity to ask any questions they may have

You

What is your involvement in the Holyland? How long for, in what capacity?

In your opinion, wat are the key consequences of conflict / divisions / tensions between people who live in the Holyland?

Decision making

In what way does your involvement affect decision making? What are the most important factors for you in making decisions about students in the Holyland?

What mapped information influences decisions?

How do you think emotion (your own and those of other stakeholders) effects or informs the decisions you make in relation to the Holyland?

Engagement

Who are the key stakeholders you engage with? Where, when and how often do you engage with these stakeholders? Please discuss any methods currently used to engage students and other stakeholders in decision making / information gathering.

How do you think emotion effects engagement in consultations? How is emotion

currently managed in consultations?

Themes

Several key concepts have emerged from research so far. For the purposes of seeking 'saturation', I would like to discuss these particular points with you.

Character of the area	How would you best describe the character of the Holyland? Prompt: attractiveness as a student location, party reputation
Heterogeneity among students	Please discuss any tensions among students in the Holyland that you are aware of. What are the short term and long term consequences of this for students and for the area?
Resources	Please describe the existence or lack of resources in the Holyland and nearby for students.
Overcrowding	The Holyland is a densely populated area. How does this overcrowding effect students' quality of life?
HMOs	Please discuss any aspects of HMO living that have an impact on quality of life for students. Prompt: the benefits of having housemates, or lack of communal space in the HMOs.
Opening of new UU campus	What impact do you think this will have on the Holyland? How will it affect the Cathedral Quarter and surrounding residential area?
Management	In your experience, how is student behavior managed in the Holyland? How could this be improved?

Future plans

What are your hopes for the future plans in the area? What are the mechanisms by which you think these can be achieved?

A.5 Test study 3 - interview schedule

Introduction

- Explain the purpose of the study
- Inform participant of schedule to be followed and ensure participant is aware of their right to take a break

- Review confidentiality
- Give the participant the opportunity to ask any questions they may have

You

What are your areas of decision making?

What is your involvement decision making in contested space?

Data that effects decision making

What are the most important factors for you in making decisions?

What mapped information influences decisions?

How do you think emotion (your own and those of other stakeholders) effects your work in the area and the decisions you make in relation to the area?

Public participation and engagement

Please discuss any methods currently used to engage residents and other stakeholders.

How do you think emotion effects engagement in consultations? How is emotion currently managed in consultations?

Emotional mapping

Introduction to the emotional maps and their context

- Readability of the maps
- Usefulness of emotional mapping in aiding decision making/public engagement in decision making process

Appendix B

B.1 Sample blank maps

The following images in Figure B-1, Figure B-2 and Figure B-3 are copies of those used during initial focus groups with participants in the first test study 1a at Gunnell Hill, Belfast.

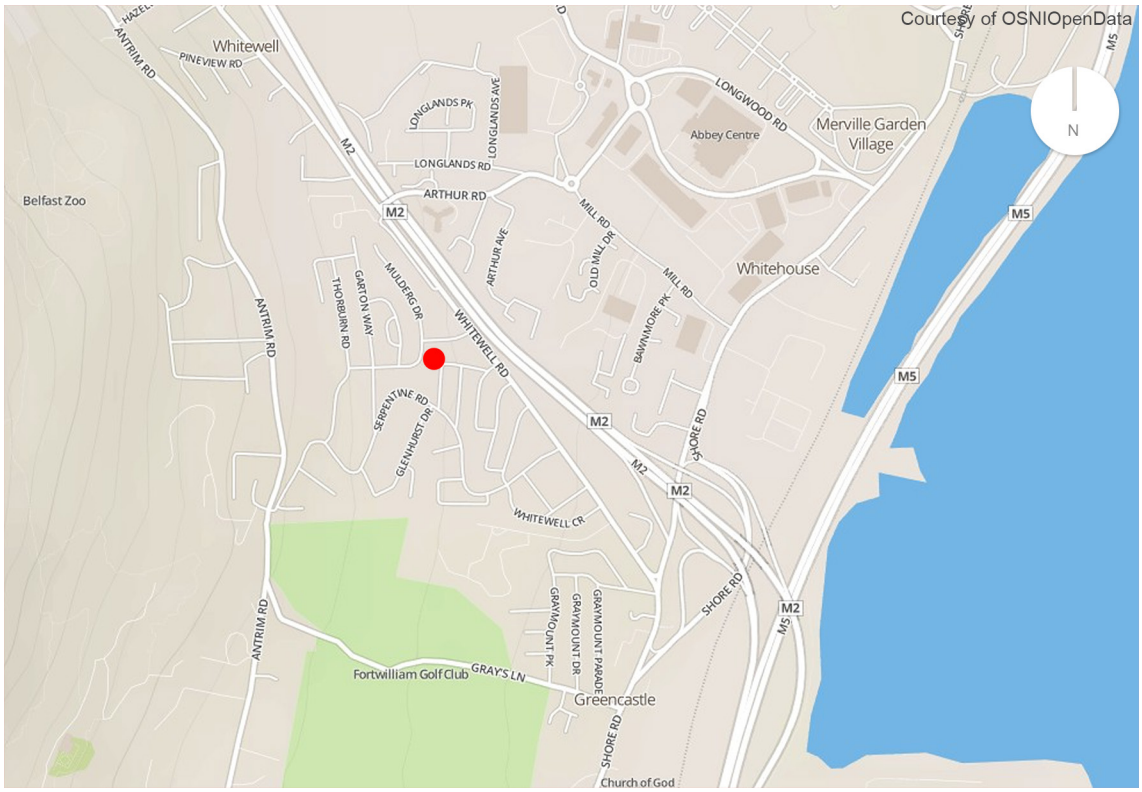


Figure B-1 Sample base map (nts) - OpenStreetMap (OpenStreetMap, 2017)

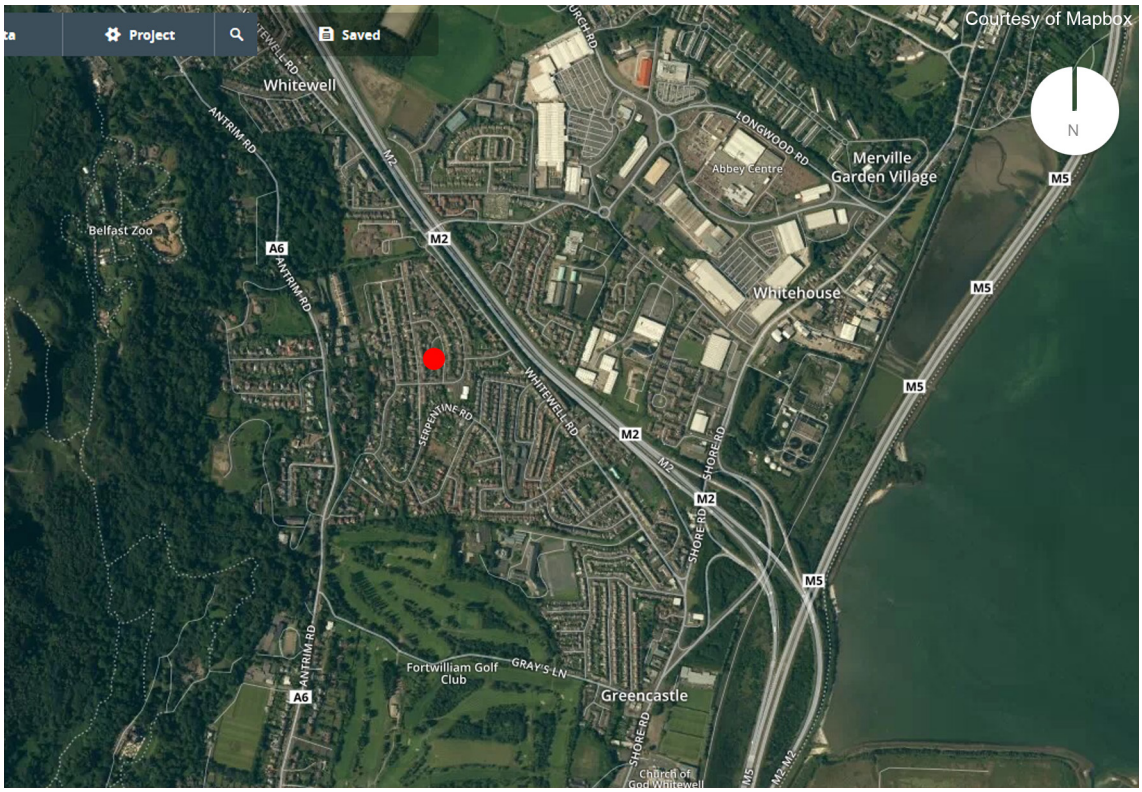


Figure B-2 Sample base map (nts) - Satellite image from Mapbox (Mapbox, 2017)

Figure B-3 Sample base map (nts) - OSNI OpenData Raster (Land and Property Services, 2017)

Appendix C

This appendix contains primary data material gathered in the course of the studies.

Section C.1 is an excerpt from the transcription of the audio-recording taken at the focus group on 3 February 2015 in the course of test study 1a (Gunnell Hill)

Section C.2 contains samples of participant observation notes taken at meetings in the course of test study 2 (Holyland).

C.1 Test study 1a - transcription excerpt

Focus group conducted 3 Feb 2015

I. so then this is one that's probably the most contentious of them and that is that it's really just graphically representing and understand --

GH1. .unmarked interfaces, so it would be the bridge here and the path way where -- where did I say it was?

GH1. is it a bit of an interface as well, yeah?

GH1. yeah, here

GH1. this in here

GH2. so what are you looking in this one here?

I. so really it was just a...to kind of graphically to represent that and this is

GH2. that's more or less...if you look at that...

I. yeah, but just the...idea that there was a sense, and I mean I put this one in because I actually thought it could be quite provocative and I don't know if I would be showing that in a focus group with Serpentine Gardens

residents. I don't know if it would achieve anything positive but it was the fact that it was this...the -- the -- idea of this kinda bull's-eye --

GH2. aha --

I. was yourself that had said that you had used that a lot --

GH2. used that terminology --

I. in your kind of --

GH2. yep

I. I: in presenting how it was to live in White City and the

GH2. 1: well I used for funders (laughs)

I. well this is it, this is it, so

GH2. to generate funding

I. it seems to be that was sort of not just an --

GH2. yep --

I. opinion but very much a sort of a collective understanding

GH2. aha

I. of a particular relationship between us beside and outside as well so I felt that I wasn't disclosing anything that was particularly private because it had been disclosed, it had been expressed an as I say, I don't know what I would gain from presenting that map to Serpentine Gardens' residents or any nationalist residents

GH1. is very stable, times moves on

I. absolutely

GH1. everything's about anything you -- investment within the areas on a shared basis. And especially if ...that's the first time I've -- I've heard that term

about White City

I. okay -- okay --

GH1. now, to be honest, as B** says we're more in the, you know, positive speak in the

I. .okay, so that's

GH1. you know --

I. .so that's

GH1. stuff like that --

I. a bit of a throw-back, is it?

GH1. but I mean if it was something new, that people heard, it could --

I. yeah --

GH1. you know, get a bit of a reaction, maybe and go, 'well I wouldn't call it a bulls-eye, I never targeted it, you know and things have moved on --

GH2. it was more or less not a -- I know where you're coming from D** and it was not the sense of being a bulls eye for targeting. People were saying, 'How could you describe...' it was being like, the centre of the bulls-eye of the board but to come out of White City you were going to have to go through you know Lower Whitewell or Longlands

GH1. yeah

GH2. or go like that sort of, not that that's the target and we're targeted. It was, 'what's was your surrounding geographically, when you were coming out of --

I. well --

GH2. you know what I mean, you weren't, you would have had to go through a

lot of nationalist areas, you weren't...you would have had to go through a lot of Nationalist areas, say to get to Rathcool or go through them to go onto like let's say Graymount or Shore Crescent or -- or.--.Mount Vernon or whatever. That's the description. It's not to be that it's a bulls-eye and it's a centralising, that's what we're targeting. That's.--.it wasn't for that reasoning --

GH1. Oh I get that, and I understand that --

GH2. It wasn't for that reason

GH1. and I understand that --

GH1. yeah

GH1. And I understand --

GH2. yeah

GH1. that --

GH2. wasn't for that reason

GH1. that you've explained but for me that's somebody from --

GH2. yeah but it just shows you that there's a perception

GH1. that's the first time that I've seen that it's like, 'hit the bulls-eye'

GH2. yeah, no it was a bulls-eye --

GH1. and so that's the way I --

GH2. a bulls eye-- what you're surrounding --

GH1. yeah

GH2. geographically, around us --

GH1. I totally get and understand --

GH2. 1: not a bulls eye to be targeted at, not, you weren't being the target. It's

just how you get out of the area

GH3. I think, J***, that worked on both sides, in all honesty because if you look at the Lower Whitewell as well we have to go through any areas as well. No matter where we went, if we had went into town, we'd to go right past Mount Vernon, Shore Crescent, all those places.so we had no freedom of movement either

C.2 Test study 2 - meetings notes

C.2.1 6 April 2016 - PACT meeting

Cecil Ward Building, Linenhall Street, Belfast. Conference Room.

Present:

- Chairperson from Holyland Residents Group
- Co-chair Belfast City Council (BCC) Community Safety Officer
- BCC cleansing officer
- Spokesperson for PSNI (i)
- Spokesperson for PSNI (ii)
- Landlord, representative of University Quarter Business Association (UQBA) (i)
- Landlord, representative of UQBA (ii)
- Chairperson of College Park Avenue Residents Association
- Member of Rugby Road Residents' Association
- Member of College Park Avenue and Rugby Road Residents' Association
- Chairperson of Stranmillis Residents' Association
- UU Community Relations Officer
- QUB Community Relations Manager
- QUB Community Relations Officer
- Representative of South Belfast Round Table

- Representative from City Church
- Main purpose of meeting:
- Gaining approval for Action Plan which had been drawn up based on extensive consultation with the public and stakeholders.
- Planning for next public meeting.

There was support for the Action plan in its current form, which covered almost 100 separate needs and complaints (?), categorising them and granting responsibility to individual stakeholder groups to progress them (see Appendix for Action plan in full).

The meeting was the first held since St Patricks Day 2016 and there was a focus on this event. Penalties, fines and other disciplinary figures. PSNI statistics on anti-social behaviour and crime, the Higher Education Institution (HEI) figures on disciplinary incidents (?) and the BCC figures on fines for drinking in public and environmental pollution (?), confiscation of alcohol. These numbers were perceived as shockingly low in relation to the estimated 8,000 people drinking and partying on the streets on St Patricks Day. It was however, accepted that the numbers reflected the fact that PSNI, BCC and the HEIs were overwhelmed, and that there was a unanimous decision to 'withdraw' on the day. As stated by one representative, their intention on the day was to support, but in practice, it was only to observe.

Alley gates – phase 4 to be decided on by MLAs – to be referred to IAG.

Tree replacement, graffiti removal

Appendix D

D.1 Test study 1a - RG3 report form

UNIVERSITY OF ULSTER **RESEARCH GOVERNANCE**

RG3 Filter Committee Report Form

Project Title	Emotional mapping: exploring how participatory GIS can add value to knowledge on decision making in contested space
Chief Investigator	Dr Neale Blair (Jennifer O'Neill PhD student)
Filter Committee	FADBE RGFC

This form should be completed by Filter Committees for all research project applications in categories A to D (*for categories A, B, and D the University's own application form – RG1a and RG1b – will have been submitted; for category C, the national, or ORECNI, application form will have been submitted).

Where substantial changes are required the Filter Committee should return an application to the Chief Investigator for clarification/amendment; the Filter Committee can reject an application if it is thought to be unethical, inappropriate, incomplete or not valid/viable.

Only when satisfied that its requirements have been met in full and any amendments are complete, the Filter Committee should make one of the following recommendations:

The research proposal is complete, of an appropriate standard and is in

- category A and the study may proceed* [X]
- category B and the study must be submitted to the University's Research Ethics Committee** Please indicate briefly the reason(s) for this categorisation [ ]

  [ ]
- category C and the study must be submitted to ORECNI along with the necessary supporting materials from the Research Governance Section*** [ ]
- category D and the study must be submitted to the University's Research Ethics Committee** [ ]

Signed:  Date: 30th November 2015

Chairperson/Administrator of Filter Committee

***The application form and this assessment should now be returned to the Chief Investigator. The Filter Committee should retain a copy of the complete set of forms.**

** **The application form and this assessment should now be returned to the Chief Investigator so that he/she can submit the application to the UUREC via the Research Governance section. The Filter Committee should retain a copy of the complete set of forms for their own records.**

*** **The application form and this assessment should now be returned to the Chief Investigator so that he/she can prepare for application to a NRES/ORECNI committee. The Filter Committee should retain a copy of the complete set of forms for their own records.**

For all categories, details of the application and review outcome should be minuted using the agreed format and forwarded to the Research Governance section

Please complete the following

The application should be accompanied by an appropriate and favourable Peer Review Report Form (if not, the Filter Committee should be prepared to address this as part of its review). Please comment on the peer review (include whether or not there is evidence that the comments of the peer reviewers have been addressed).

The application was accompanied by an appropriate and favourable peer review report.

Please provide an assessment of all component parts of the application, including questionnaires, interview schedules or outline areas for group discussion/unstructured interviews.

All component parts of the application are appropriate and well designed.

Please comment on the consent form and information sheet, in particular the level of language and accessibility.

The consent form and information sheet are designed in an appropriate level of language and are accessible.

Please comment on the qualifications of the Chief and other Investigators.

Excellent

Please comment on the risks present in conducting the study and whether or not they have been addressed.

Risks have been considered and are managed.

Please indicate whether or not the ethical issues have been identified and addressed.

Ethical issues have been identified and addressed.

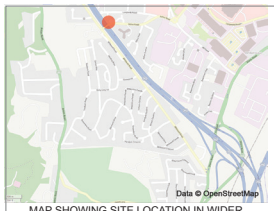
Please comment on whether or not the subjects are appropriate to the study and the inclusion/exclusion criteria have been identified and listed

Subjects are appropriate to the study and the inclusion/exclusion criteria have been identified and listed.

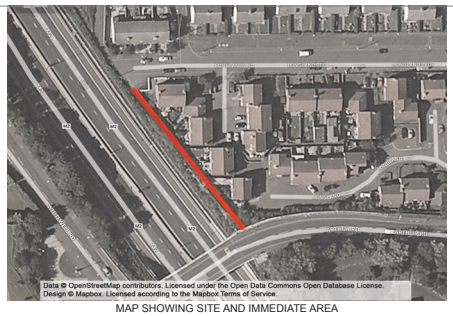
Appendix E

The following sections of this appendix contain copies of graphics produced by the author for projects entitled “Re-imaging the Greater Whitewell Community” and “Reimaging the Lower Oldpark/Cliftonville” respectively.

E.1 Test study 1a - reimaging visuals



MAP SHOWING SITE LOCATION IN WIDER AREA

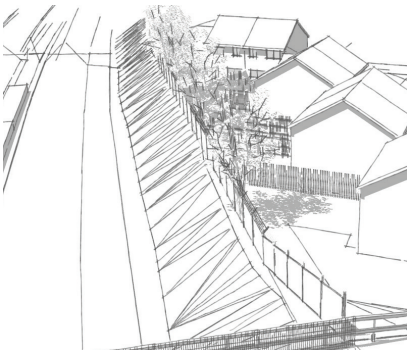


MAP SHOWING SITE AND IMMEDIATE AREA

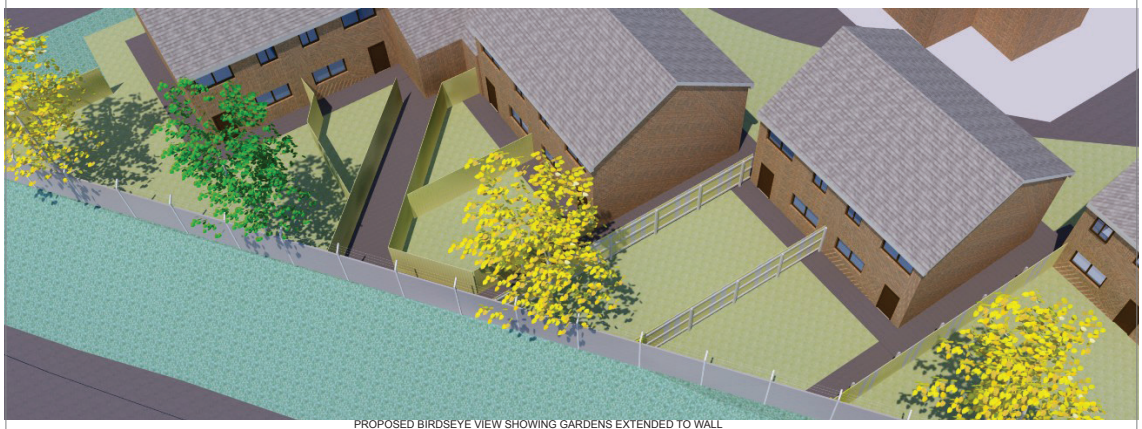
VIEW FROM BRIDGE OF CORRIDOR AND HOUSES

Arthur Bridge Option 1

PROPOSED EYE-LEVEL VIEW OF GARDEN FENCES AND ACOUSTIC WALL



PROPOSED SKETCH VIEW FROM ARTHUR BRIDGE



PROPOSED BIRDSEYE VIEW SHOWING GARDENS EXTENDED TO WALL

project	Re-imaging the Greater Whitewell Community
client	Greater Whitewell Community Surgery
site	Site 6 Arthur Bridge

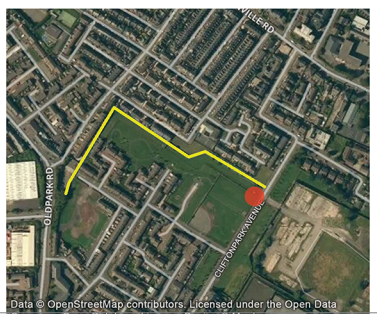
drawing title	Option 1 acoustic wall and extension of gardens
date	October 2014
drawn by	Jennifer O'Neill, Built Environment Research Institute

E.2 Test study 1b - reimaging visuals

Site 1

PHOTO OF SITE BEFORE WORK

PHOTO OF SITE AFTER WORK



Peace Walls Programme

INTERNATIONAL FUND FOR IRELAND

Site 2 option a

PHOTO OF EXISTING

PHOTOMONTAGE OF PROPOSED

Peace Walls Programme

INTERNATIONAL FUND FOR IRELAND

Ulster University

IMAGINE PEACE WALLS PROJECT

Site 2 option b

PHOTO OF EXISTING

PHOTOMONTAGE OF PROPOSED

LOCATION MAP

Peace Walls Programme

INTERNATIONAL FUND FOR IRELAND

Images and mapwork completed by the Built Environment Research Institute, Ulster University

Site 3

PHOTO OF SITE BEFORE WORK

PHOTO OF SITE AFTER WORK

LOCATION MAP

Peace Walls Programme

INTERNATIONAL FUND FOR IRELAND

Images and mapwork completed by the Built Environment Research Institute, Ulster University

Site 4

PHOTO OF EXISTING

PHOTOMONTAGE OF PROPOSED

LOCATION MAP

Peace Walls Programme

INTERNATIONAL FUND FOR IRELAND

Images and mapwork completed by the Built Environment Research Institute, Ulster University

Site 5

PHOTO OF EXISTING

PHOTOMONTAGE OF PROPOSED

LOCATION MAP

Peace Walls Programme

INTERNATIONAL FUND FOR IRELAND

Images and mapwork completed by the Built Environment Research Institute, Ulster University

Site 9

PHOTO OF EXISTING

PHOTOMONTAGE OF PROPOSED

LOCATION MAP

Peace Walls Programme

INTERNATIONAL FUND FOR IRELAND

Images and mapwork completed by the Built Environment Research Institute, Ulster University

Site 10

PHOTO OF EXISTING

PHOTOMONTAGE OF PROPOSED

LOCATION MAP

Peace Walls Programme

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IMAGINE PEACE WALLS PROJECT

Images and mapwork completed by the Built Environment Research Institute, Ulster University

Site 12

PHOTO OF EXISTING

PHOTOMONTAGE OF PROPOSED

LOCATION MAP

Peace Walls Programme

INTERNATIONAL FUND FOR IRELAND

Images and mapwork completed by the Built Environment Research Institute, Ulster University

Site 16

PHOTO OF EXISTING

PHOTOMONTAGE OF PROPOSED

LOCATION MAP

Peace Walls Programme

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Ulster University | IMAGINE PEACE WALLS PROJECT | LOCA

Images and mapwork completed by the Built Environment Research Institute, Ulster University

E.3 Comments gathered in Study 1b

Table E-1 below contains all the comments gathered in the course of study 1b under the headings of the sites they relate to.

Table E-1 List of comments gathered Test Study 1b

Site 2 a & b
I think that the wall taken down would be a lot better for both communities and the place would look better.
Would make the community look a lot better with the big yellow wall away.
Keep their dogs out of the Park at all times
Bins for dog waste.
Should tidy it up a bit and let kids be involved in doing it.
Shrubs and bushes great idea to soften the harsh appearance.
It would make it brighter.
Would look a lot better if painted.
Would look a lot brighter.
Brighten the place up.
Clean it up.
Makes the Park tidier.
The wall should be higher with see through barriers. Changing colour makes it look brighter and trees make it tidier. I would have concerns of kids climbing them though.
Site 4
Removing the harshness and allowing more light into homes would be positive.
Southport Court should not be a see through barrier.
People living here would have to say I think that the light would be better.
Do not agree barrier should not be see through.
Should keep barriers there as easy to see into houses.
Should not be see through and keep it up so no one can see into homes.
Leave it up and make it safe.
Site 5
Looks better for people who live there.
Would like this wall to definitely stay up.
This would transform the boundary wall by letting in more light, not compromise resident safety and improve the appearance of the area.
The walls look great no change just see through

Site 9
No concerns with the wall down don't think it will effect safety to the community.
Glad to see wall removed will see children playing.
Wall need put down-eye-sore – kids need to be seen.
I think removing the wall could be good.
Remove the brick wall and replace with a transparent fence would be a positive result for children's safety, more visibility at this very volatile interface.
The wall is an eyesore.
Art work on the metal
Wall needs a makeover.
Love the Park for the kids but the wall is an eyesore if they took it away and just kept the railings.
Hopefully wall will come down so that children can be seen. It's an eyesore.
Site 10
Yes agree with proposals.
Will look better.
Site 16
Cut tree down and clean it up.
Looks better and tidier.
Looks better with signs away.
Looks a lot better.
Tidy up a bit and maybe cut trees down a bit.
Looks terrible with that timber and signs.
Agree to the proposals make the community better for the future.
Looks a lot better.
With change the look is for better.

Appendix F

The following two images in Figure F-2 and Figure F-1 show open codes and axial codes created in studies 2 and 3 respectively.

F.1 Word Cloud Study 2

Figure F-1 Word cloud of coding in Study 2

F.2 Word Cloud Study 3

Figure F-2 Word cloud of coding in Study 3

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